```
Enter NEWS followed by the item number or name to see news on that
specific topic.

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  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 10:25:21 ON 22 DEC 2004

=> b registry
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'REGISTRY' ENTERED AT 10:25:27 ON 22 DEC 2004
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   20 DEC 2004  HIGHEST RN 800365-77-9
DICTIONARY FILE UPDATES:  20 DEC 2004  HIGHEST RN 800365-77-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> s rp()8()monobutyryl()camps
          1229 RP
       2375391 8
            18 MONOBUTYRYL
             1 CAMPS
L1           0 RP(W)8(W)MONOBUTYRYL(W)CAMPS

=> s 8()monobutyryl()camps
       2375391 8
            18 MONOBUTYRYL
             1 CAMPS
L2           0 8(W)MONOBUTYRYL(W)CAMPS

=> s monobutyryl()camps
            18 MONOBUTYRYL
             1 CAMPS
L3           0 MONOBUTYRYL(W)CAMPS

=> s rp()8()monobutyryl()cyclic()adenosine()monophosphorothioate
          1229 RP
       2375391 8
            18 MONOBUTYRYL
         88903 CYCLIC
```

```
         64388 ADENOSINE
             4 MONOPHOSPHOROTHIOATE
L4           0 RP(W)8(W)MONOBUTYRYL(W)CYCLIC(W)ADENOSINE(W)MONOPHOSPHOROTHIOATE

=> s monobutyryl()cyclic()adenosine()monophosphorothioate
            18 MONOBUTYRYL
         88903 CYCLIC
         64388 ADENOSINE
             4 MONOPHOSPHOROTHIOATE
L5           0 MONOBUTYRYL(W)CYCLIC(W)ADENOSINE(W)MONOPHOSPHOROTHIOATE

=> s monobutyryl()cyclic()adenosine()monophosphate
            18 MONOBUTYRYL
         88903 CYCLIC
         64388 ADENOSINE
          1513 MONOPHOSPHATE
L6           0 MONOBUTYRYL(W)CYCLIC(W)ADENOSINE(W)MONOPHOSPHATE

=> s monobutyryl()camp
            18 MONOBUTYRYL
         13638 CAMP
L7           2 MONOBUTYRYL(W)CAMP

=> d l7 ibib
'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual
fields or predefined formats.  The predefined substance formats
are:  (RN = CAS Registry Number)

REG     - RN
SAM     - Index Name, MF, and structure - no RN
FIDE    - All substance data, except sequence data
IDE     - FIDE, but only 50 names
SQIDE   - IDE, plus sequence data
SQIDE3  - Same as SQIDE, but 3-letter amino acid codes are used
SQD     - Protein sequence data, includes RN
SQD3    - Same as SQD, but 3-letter amino acid codes are used
SQN     - Protein sequence name information, includes RN

CALC    - Table of calculated properties
EPROP   - Table of experimental properties
PROP    - EPROP and CALC

Any CA File format may be combined with any substance format to
obtain CA references citing the substance.  The substance formats
must be cited first.  The CA File predefined formats are:

ABS  -- Abstract
APPS -- Application and Priority Information
BIB  -- CA Accession Number, plus Bibliographic Data
CAN  -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND  -- Index Data
IPC  -- International Patent Classification
PATS -- PI, SO
STD  -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
```

OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

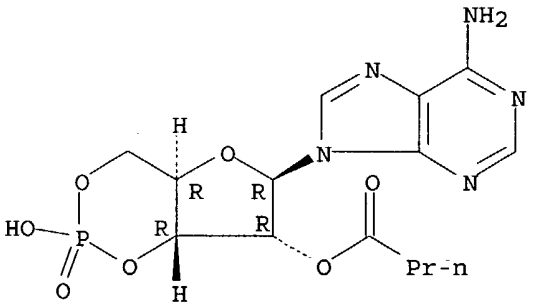
The ALL format gives FIDE BIB ABS IND RE, plus sequence data when
it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented,
with text labels.

For additional information, please consult the following help
messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):ide

L7 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN 15392-98-0 REGISTRY
CN Adenosine, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
CN Adenosine cyclic 3',5'-phosphate, 2'-butyrate (7CI)
CN Adenosine, cyclic 3',5'-(hydrogen phosphate) 2'-butyrate (8CI)
CN Butyric acid, 2'-ester with adenosine cyclic 3',5'-(hydrogen phosphate) (8CI)
OTHER NAMES:
CN 2'-O-Butyryladenosine 3',5'-cyclic phosphate
CN 2'-O-Monobutyryl 3',5'-adenosine monophosphate
CN **2'-O-Monobutyryl-cAMP**
CN 2'-O-Monobutyryl-cyclic AMP
CN 2'-O-Monobutyryladenosine 3',5'-cyclic monophosphate
CN O2'-Butyryl cyclic-AMP
CN O2'-Monobutyryl cyclic AMP
CN O2'-Monobutyryladenosine 3',5'-cyclic monophosphate
FS STEREOSEARCH
DR 43150-63-6
MF C14 H18 N5 O7 P
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.

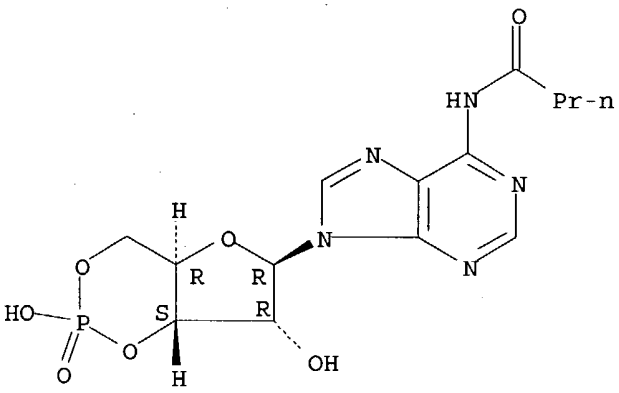


61 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
61 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d ide 2

L7 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN 13117-60-7 REGISTRY
CN Adenosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.
CN Butyramide, N-(9-β-D-ribofuranosyl-9H-purin-6-yl)-, cyclic hydrogen phosphate (8CI)
OTHER NAMES:
CN Cyclic N6-monobutyryladenosine-3',5'-monophosphate
CN Monobutyryl adenosine cyclic 3',5'-monophosphate
CN N6-Butyryl cyclic AMP
CN N6-Butyryl-3',5'-cyclic AMP
CN N6-Butyryl-cAMP
CN N6-Butyryladenosine 3',5'-cyclic phosphate
CN N6-Monobutyryl 3',5'-cyclic AMP
CN N6-Monobutyryl cyclic AMP
CN **N6-Monobutyryl-cAMP**
CN N6-Monobutyryladenosine 3',5'-cyclic monophosphate
CN N6-Monobutyryladenosine-3',5'-cyclic monophosphoric acid
FS STEREOSEARCH
DR 29117-37-1, 32266-36-7
MF C14 H18 N5 O7 P
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, CA, CANCERLIT, CAPLUS, CASREACT, DDFU, DRUGU, MEDLINE, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



257 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
257 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
=> s monobutyryl()camp?
            18 MONOBUTYRYL
         16709 CAMP?
L8            2 MONOBUTYRYL(W)CAMP?

=> s Monobutyryladenosine 3',5'-cyclic mono?
             2 MONOBUTYRYLADENOSINE
        635336 3',5'
         88903 CYCLIC
        728199 MONO?
L9            0 MONOBUTYRYLADENOSINE 3',5'-CYCLIC MONO?
                (MONOBUTYRYLADENOSINE(W)3',5'(W)CYCLIC(W)MONO?)

=> s Monobutyryladenosine 3',5'-cyclic mono#
             2 MONOBUTYRYLADENOSINE
        635336 3',5'
         88903 CYCLIC
        728194 MONO#
L10           0 MONOBUTYRYLADENOSINE 3',5'-CYCLIC MONO#
                (MONOBUTYRYLADENOSINE(W)3',5'(W)CYCLIC(W)MONO#)

=> s Monobutyryladenosine 3',5'-cyclic
             2 MONOBUTYRYLADENOSINE
        635336 3',5'
         88903 CYCLIC
L11           0 MONOBUTYRYLADENOSINE 3',5'-CYCLIC
                (MONOBUTYRYLADENOSINE(W)3',5'(W)CYCLIC)

=> s chlorophenyl(5n)thio(5n)cyclic
       1122743 CHLOROPHENYL
       2118603 THIO
         88903 CYCLIC
L12          111 CHLOROPHENYL(5A)THIO(5A)CYCLIC

=> s chlorophenyl(5n)thio(5n)cyclic and adenosine
       1122743 CHLOROPHENYL
       2118603 THIO
         88903 CYCLIC
           111 CHLOROPHENYL(5A)THIO(5A)CYCLIC
         64388 ADENOSINE
L13           54 CHLOROPHENYL(5A)THIO(5A)CYCLIC AND ADENOSINE

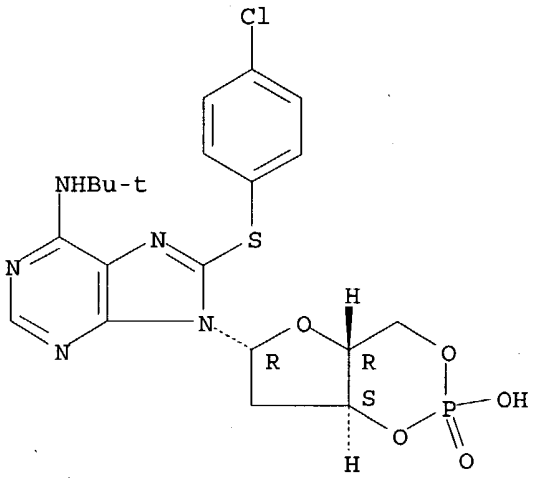
=> dup rem l13
```

DUPLICATE IS NOT AVAILABLE IN 'REGISTRY'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L13
L14 54 DUP REM L13 (0 DUPLICATES REMOVED)

=> d l14 tot

L14 ANSWER 1 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-50-7 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-N-(1,1-dimethylethyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C20 H23 Cl N5 O5 P S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

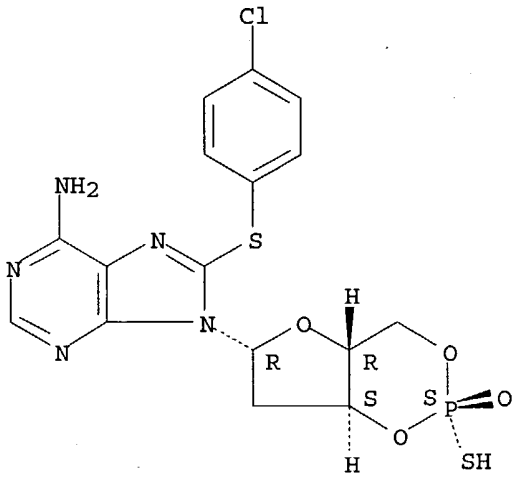
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 2 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-45-0 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-[hydrogen (S)-phosphorothioate] (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O4 P S2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

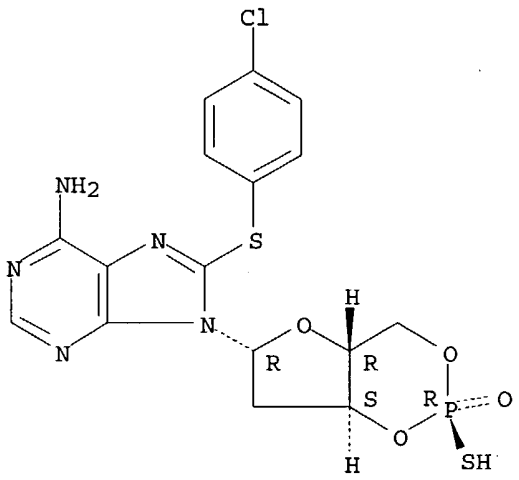
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 3 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-43-8 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-[hydrogen (R)-phosphorothioate] (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O4 P S2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

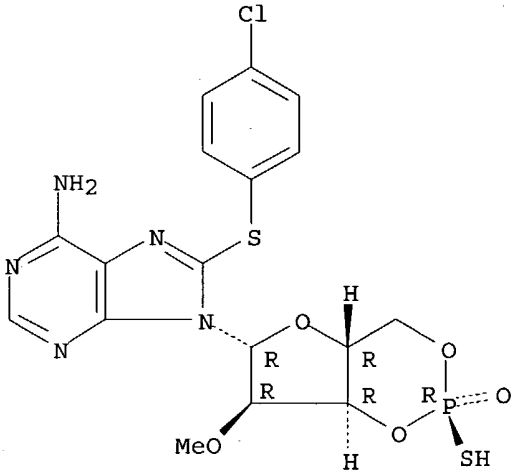


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 4 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-38-1 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic**

3',5'-[hydrogen (R)-phosphorothioate] (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O5 P S2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

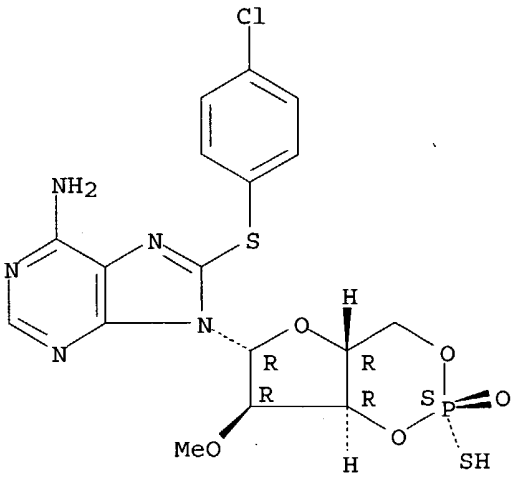
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 5 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-37-0 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic 3',5'-[hydrogen (S)-phosphorothioate] (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O5 P S2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

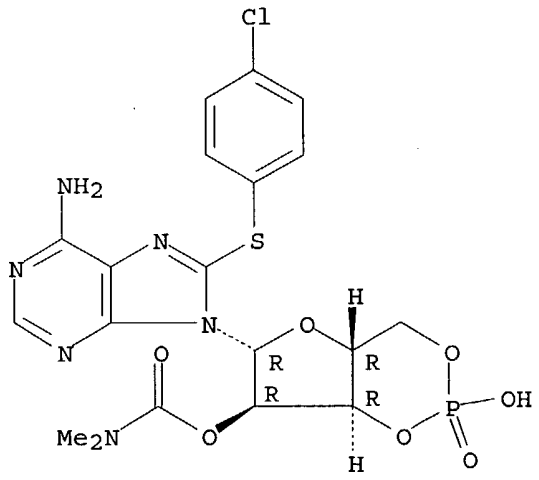
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 6 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-28-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) 2'-(dimethylcarbamate) (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H20 Cl N6 O7 P S
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

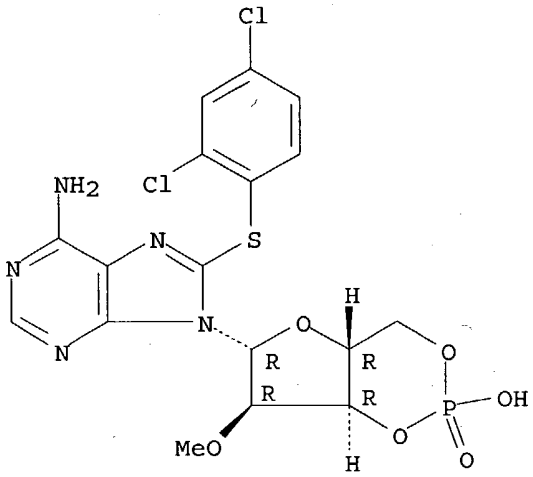


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 7 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-26-7 REGISTRY
CN **Adenosine, 8-[(2,4-dichlorophenyl)thio]-2'-O-methyl-, cyclic**

3',5'-(hydrogen phosphate) (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H16 Cl2 N5 O6 P S
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

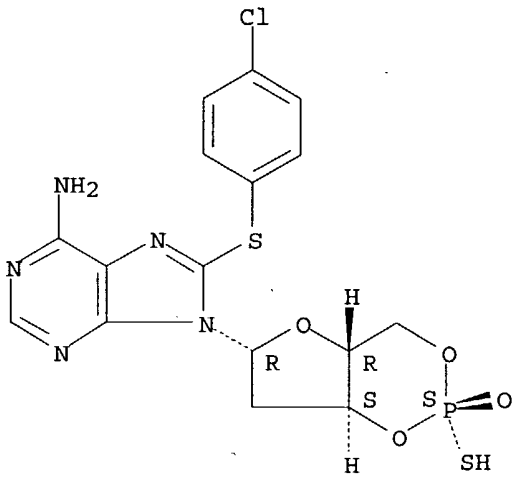
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 8 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-02-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-[hydrogen (S)-phosphorothioate], monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O4 P S2 . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (634208-45-0)

Absolute stereochemistry.

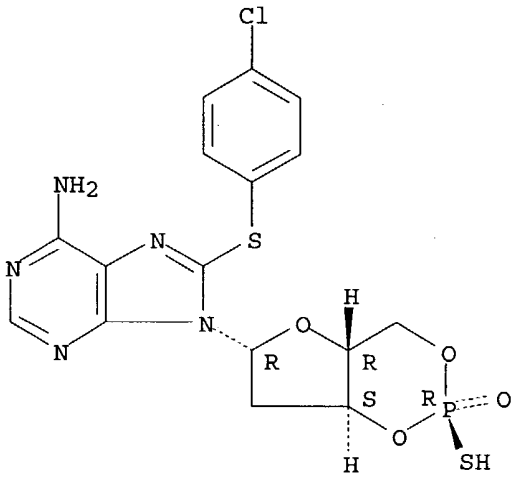


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 9 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634208-01-8 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-[hydrogen (R)-phosphorothioate], monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O4 P S2 . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (634208-43-8)

Absolute stereochemistry.

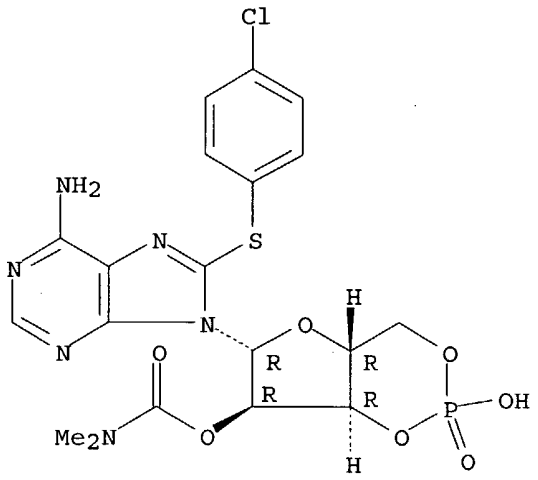


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 10 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-96-8 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) 2'-(dimethylcarbamate), monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H20 Cl N6 O7 P S . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (634208-28-9)

Absolute stereochemistry.

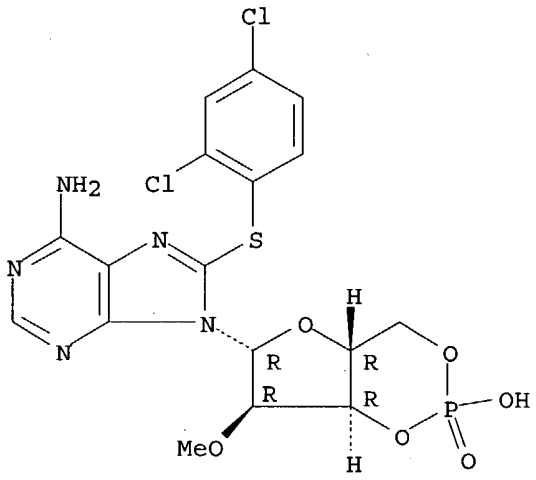


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 11 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-95-7 REGISTRY
CN **Adenosine, 8-[(2,4-dichlorophenyl)thio]-2'-O-methyl-, cyclic 3',5'-(hydrogen phosphate), monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H16 Cl2 N5 O6 P S . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (634208-26-7)

Absolute stereochemistry.

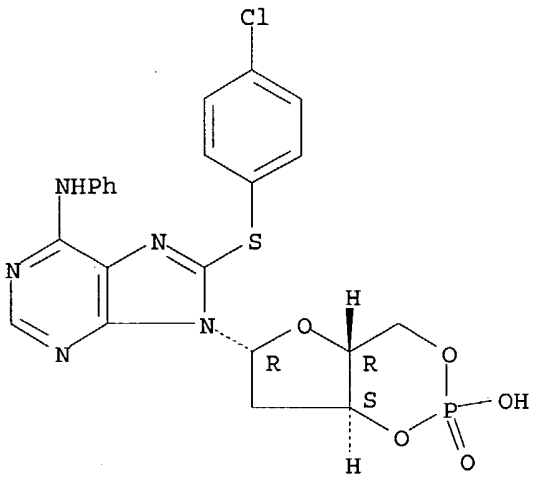


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 12 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-71-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-N-phenyl-, cyclic 3',5'-(hydrogen phosphate), monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H19 Cl N5 O5 P S . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (612513-12-9)

Absolute stereochemistry.

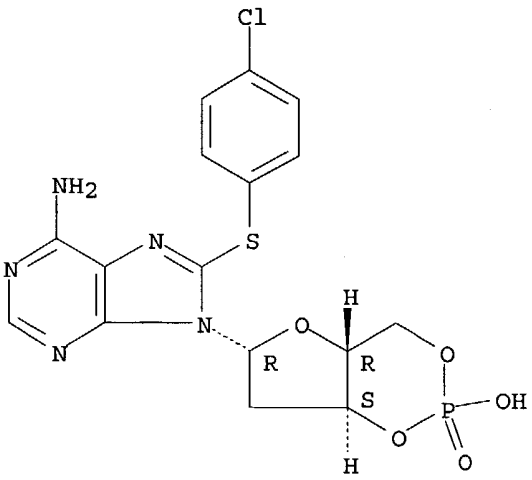


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 13 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-70-8 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-(hydrogen phosphate), monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER .
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (137756-34-4)

Absolute stereochemistry.

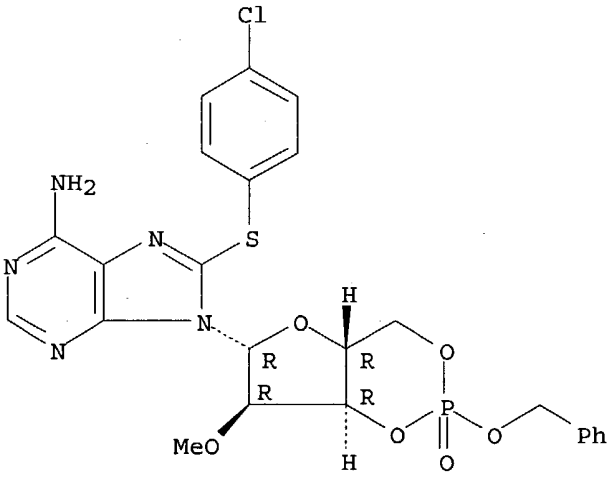


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 14 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-68-4 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic 3',5'-(phenylmethyl phosphate) (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C24 H23 Cl N5 O6 P S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

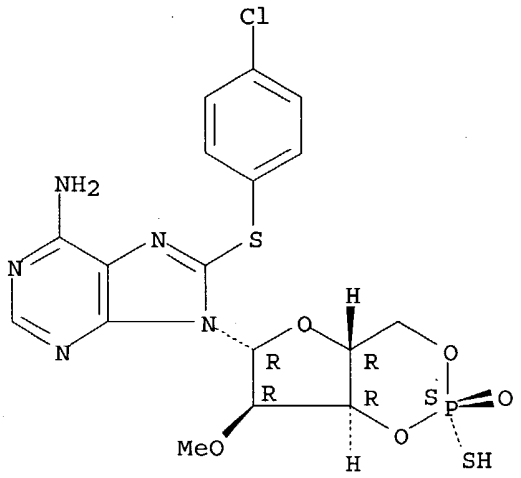


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 15 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-63-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic 3',5'-[hydrogen (S)-phosphorothioate], monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O5 P S2 . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (634208-37-0)

Absolute stereochemistry.

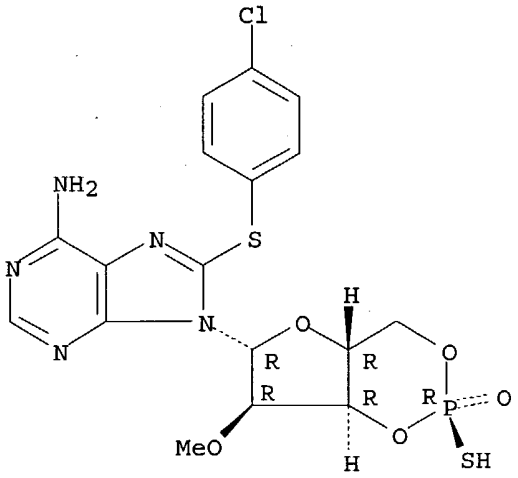


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 16 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-62-8 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic 3',5'-[hydrogen (R)-phosphorothioate], monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O5 P S2 . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (634208-38-1)

Absolute stereochemistry.

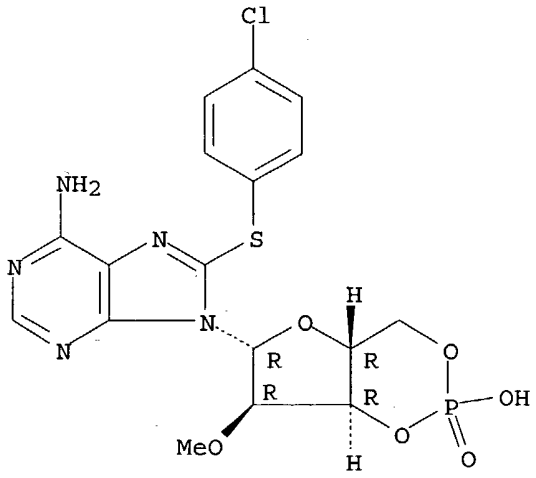


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 17 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 634207-53-7 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic 3',5'-(hydrogen phosphate), monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O6 P S . Na
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
CRN (510774-50-2)

Absolute stereochemistry.

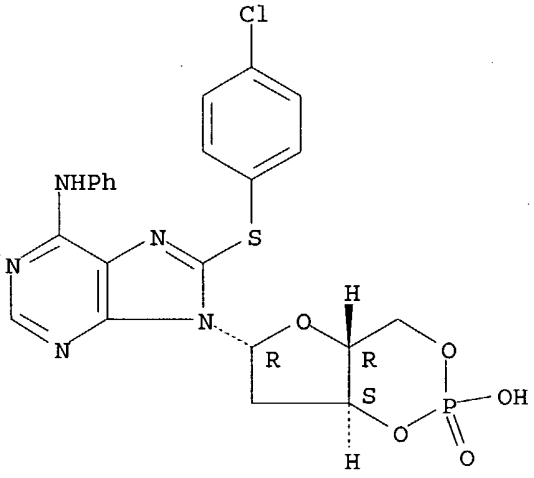


● Na

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 18 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 612513-12-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-N-phenyl-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C22 H19 Cl N5 O5 P S
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study)

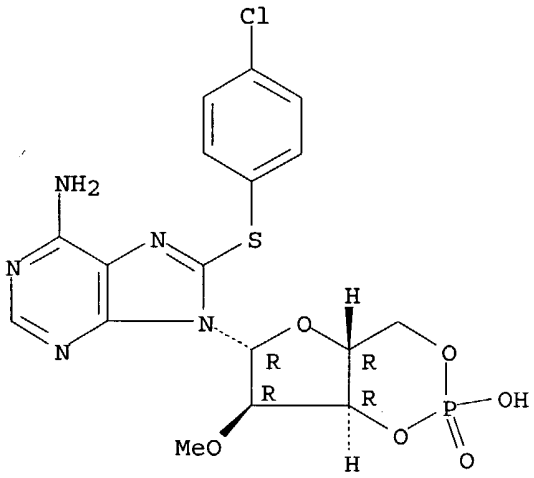
Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

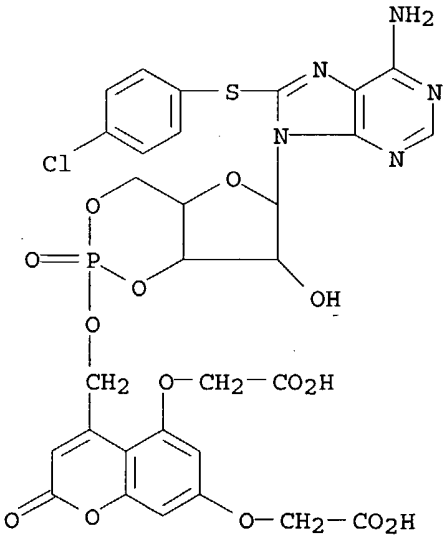
L14 ANSWER 19 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 510774-50-2 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-O-methyl-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O6 P S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER
DT.CA CAplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); USES (Uses)

Absolute stereochemistry.



7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

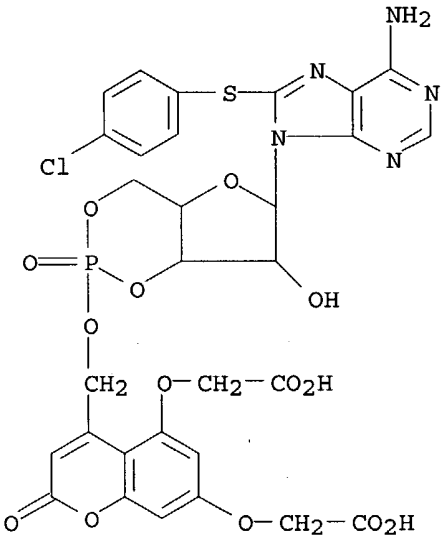
L14 ANSWER 20 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 370091-73-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[[5,7-bis(carboxymethoxy)-2-oxo-2H-1-benzopyran-4-yl]methyl (R)-phosphate] (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C30 H25 Cl N5 O14 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 21 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 370091-71-7 REGISTRY

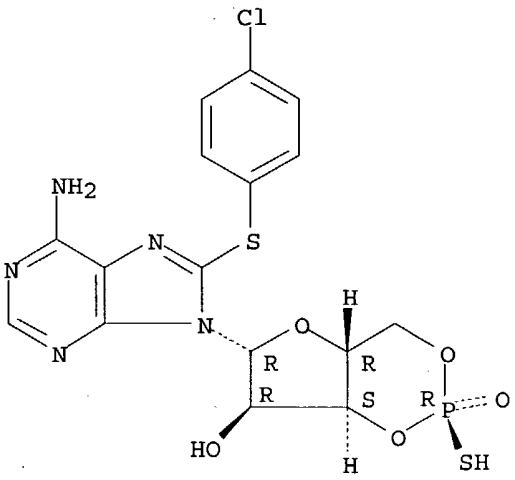
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[[5,7-bis(carboxymethoxy)-2-oxo-2H-1-benzopyran-4-yl]methyl (S)-phosphate] (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C30 H25 Cl N5 O14 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 22 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 221905-35-7 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (R)-phosphorothioate], monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S2 . Na
SR CAS Client Services
CRN (129735-01-9)

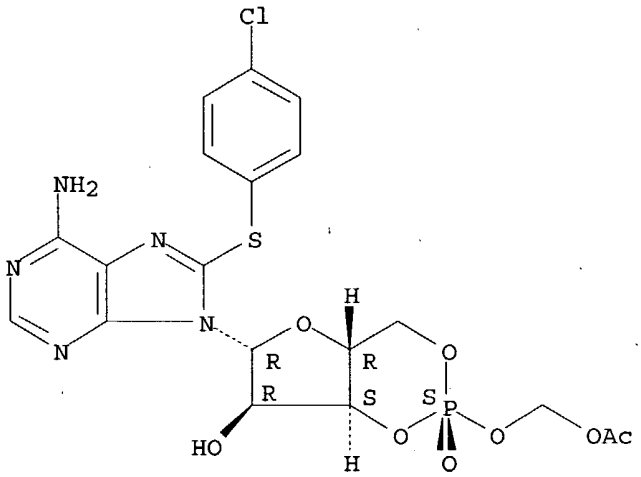
Absolute stereochemistry.



● Na

L14 ANSWER 23 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 190522-25-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[(S)-(acetyloxy)methyl phosphate] (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H19 Cl N5 O8 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Absolute stereochemistry.



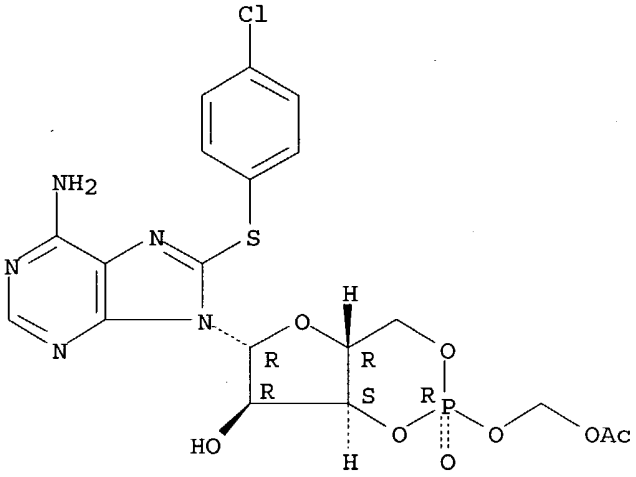
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 24 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 190522-21-5 REGISTRY

CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[(acetyloxy)methyl (R)-phosphate] (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C19 H19 Cl N5 O8 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Absolute stereochemistry.

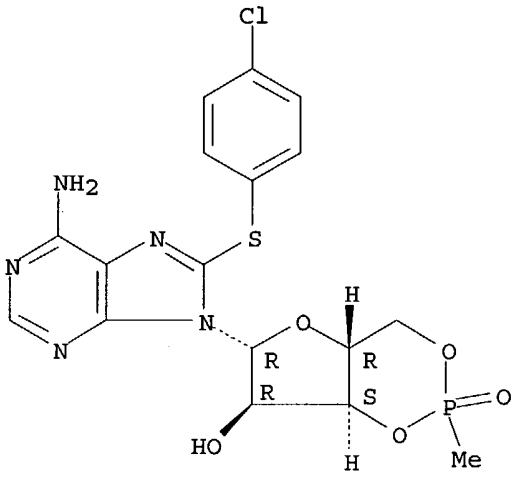


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 25 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 173367-03-8 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(methylphosphonate) (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H17 Cl N5 O5 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

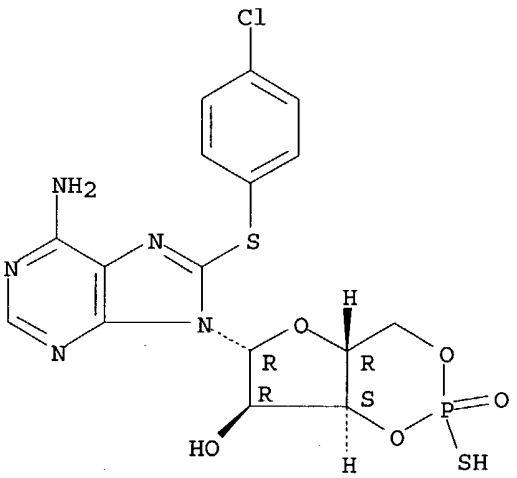


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 26 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 152322-59-3 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study)
RL.NP Roles from non-patents: BIOL (Biological study)

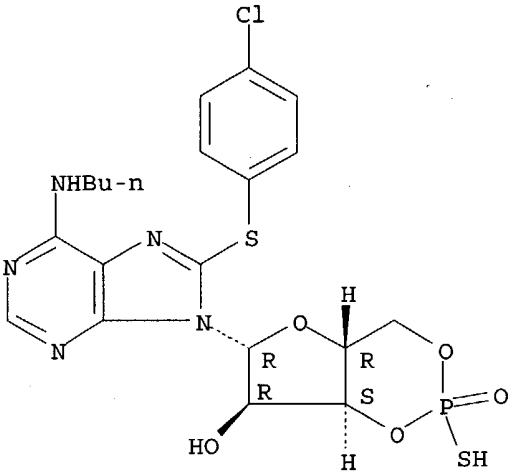
Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 27 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 152218-14-9 REGISTRY
CN **Adenosine, N-butyl-8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C20 H23 Cl N5 O5 P S2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study)

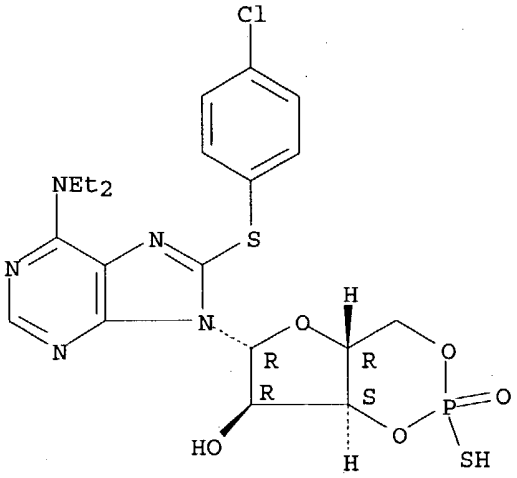
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 28 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 152218-11-6 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-N,N-diethyl-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C20 H23 Cl N5 O5 P S2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study)

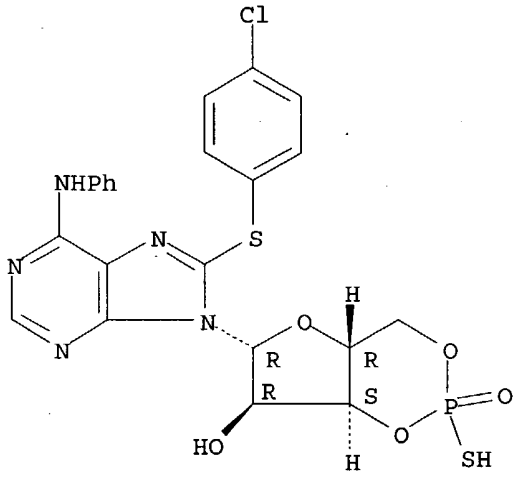
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 29 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 152218-10-5 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-N-phenyl-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C22 H19 Cl N5 O5 P S2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study)

Absolute stereochemistry.

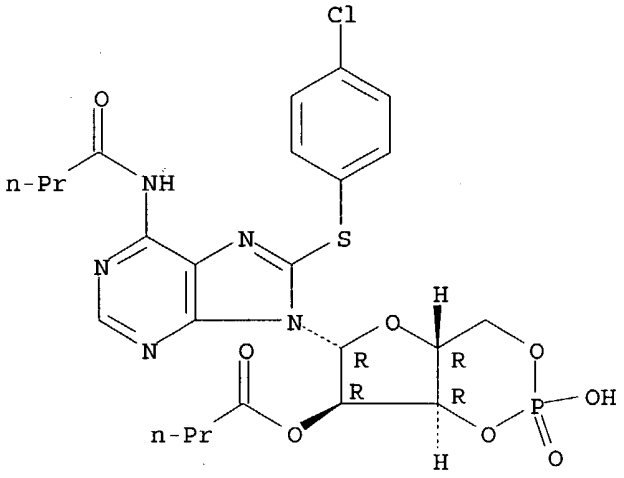


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 30 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 143329-37-7 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-N-(1-oxobutyl)-, cyclic**

3',5'-(hydrogen phosphate) 2'-butanoate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C24 H27 Cl N5 O8 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study)

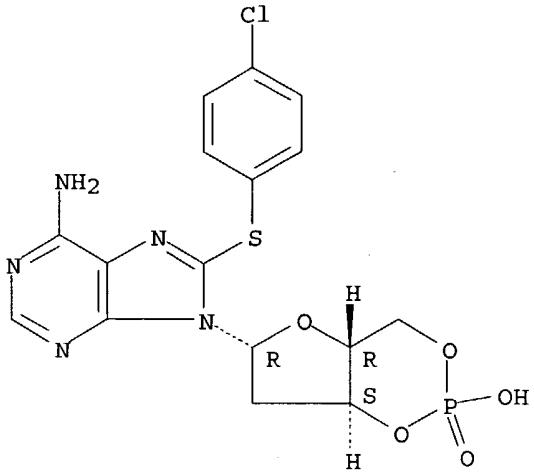
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 31 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 137756-34-4 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2'-deoxy-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study)

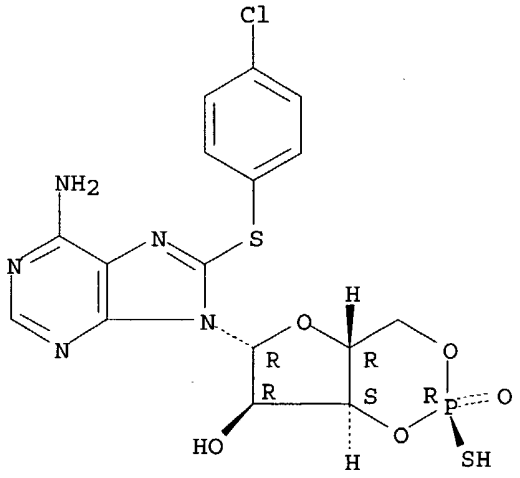
Absolute stereochemistry.



4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 32 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 129735-01-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (R)-phosphorothioate] (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate), (R)-**
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, TOXCENTER
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PROC (Process); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); USES (Uses)

Absolute stereochemistry.

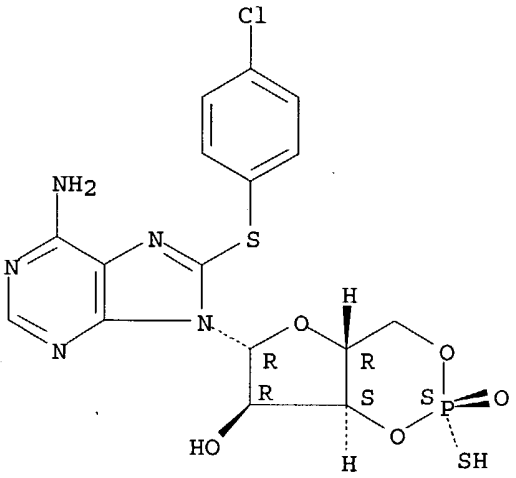


6 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 33 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 129693-13-6 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (S)-phosphorothioate] (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate), (S)-**
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S2
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); USES (Uses)

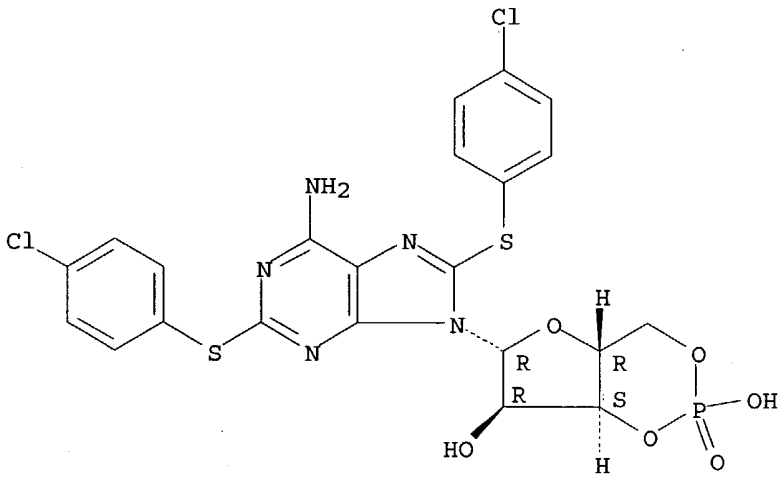
Absolute stereochemistry.



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 34 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 125338-15-0 REGISTRY
CN **Adenosine, 2,8-bis[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C22 H18 Cl2 N5 O6 P S2
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study)

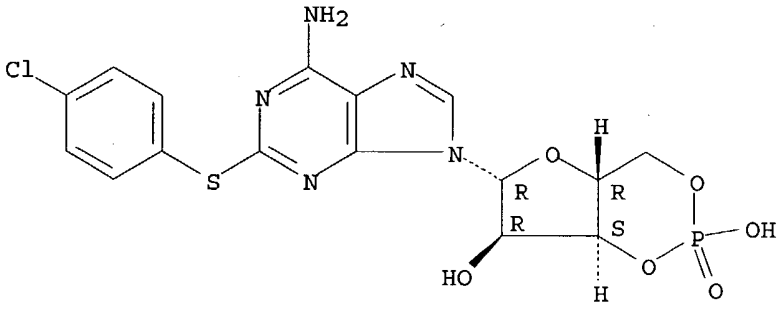
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 35 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 125322-59-0 REGISTRY
CN **Adenosine, 2-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C16 H15 Cl N5 O6 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study)

Absolute stereochemistry.

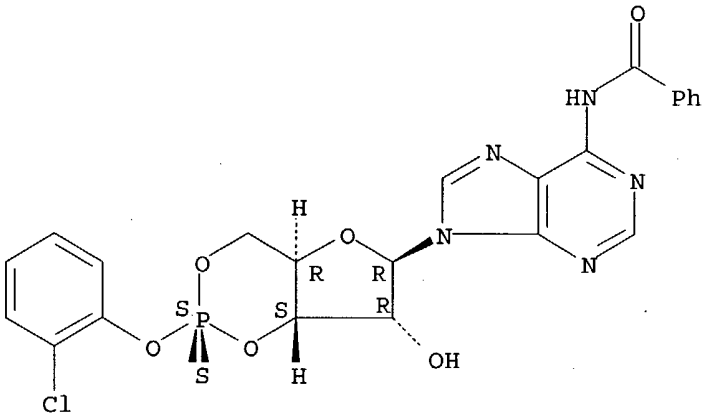


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 36 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 115351-08-1 REGISTRY
CN **Adenosine, N-benzoyl-, cyclic 3',5'-[O-(2-chlorophenyl) phosphorothioate], (S)- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C23 H19 Cl N5 O6 P S
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

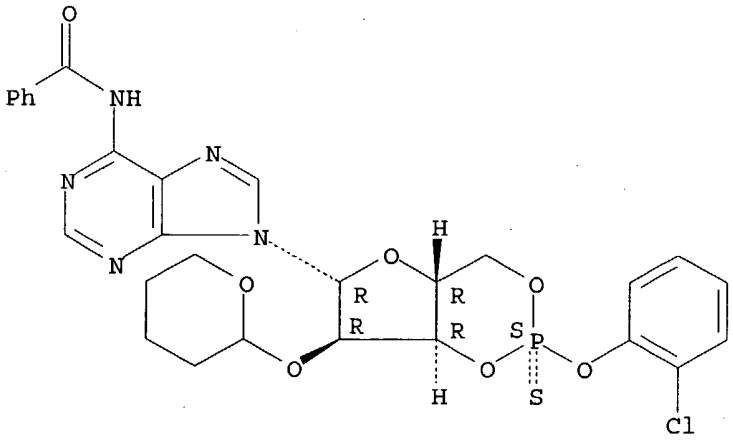


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 37 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 115351-05-8 REGISTRY
CN **Adenosine, N-benzoyl-2'-O-(tetrahydro-2H-pyran-2-yl)-, cyclic 3',5'-[O-(2-chlorophenyl) phosphorothioate], (S)- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C28 H27 Cl N5 O7 P S
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

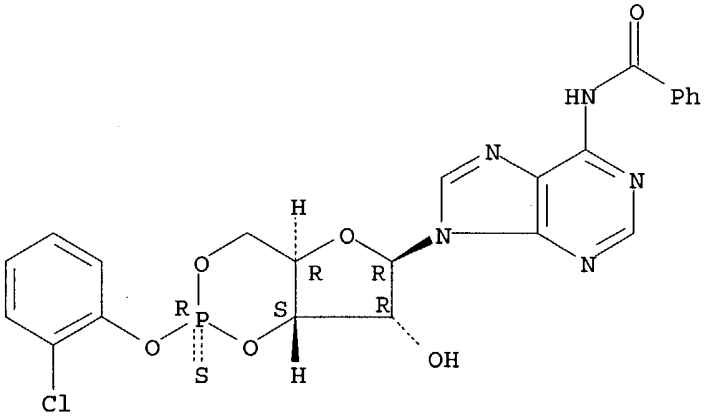


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 38 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 115350-97-5 REGISTRY
CN **Adenosine, N-benzoyl-, cyclic 3',5'-[O-(2-chlorophenyl) phosphorothioate], (R)- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C23 H19 Cl N5 O6 P S
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

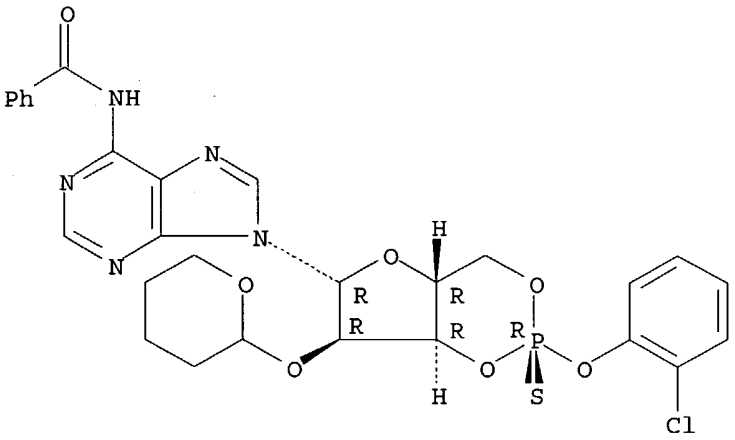


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 39 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 115350-96-4 REGISTRY
CN **Adenosine, N-benzoyl-2'-O-(tetrahydro-2H-pyran-2-yl)-, cyclic 3',5'-[O-(2-chlorophenyl) phosphorothioate], (R)- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C28 H27 Cl N5 O7 P S
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

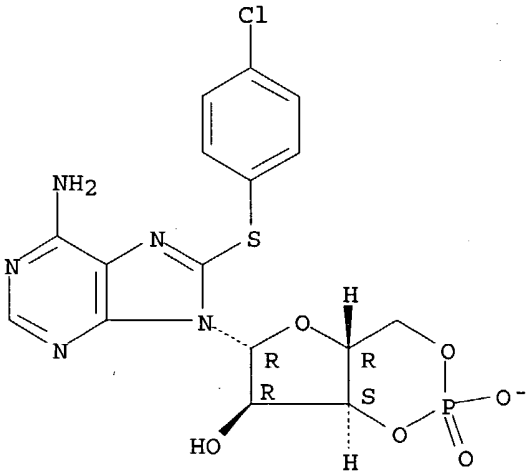


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 40 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 112141-30-7 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate), ion(1-) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C16 H14 Cl N5 O6 P S
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: ANST (Analytical study); PROC (Process)

Absolute stereochemistry.

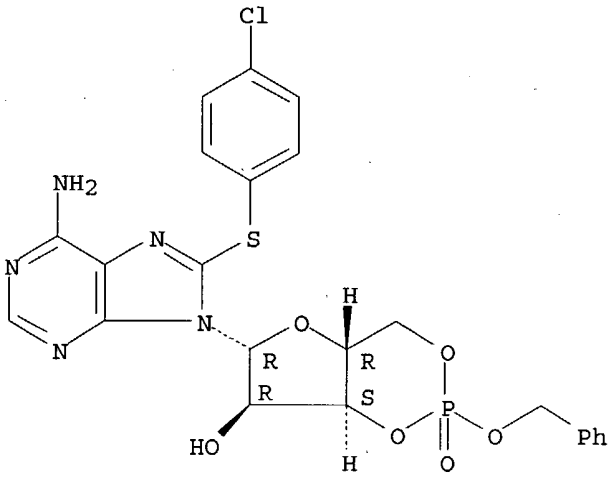


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 41 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 107538-70-5 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(phenylmethyl phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C23 H21 Cl N5 O6 P S
SR CA
LC STN Files: CA, CAPLUS, CASREACT
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.

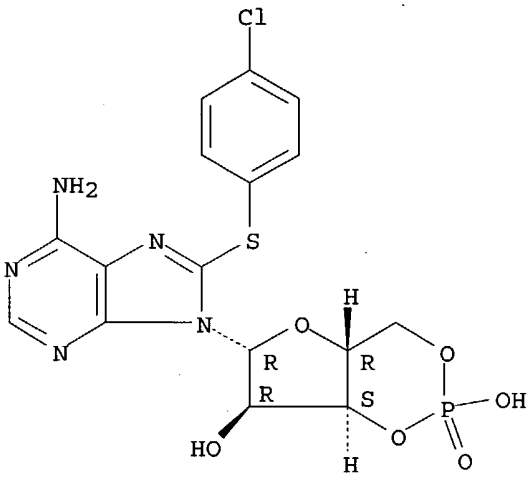


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 42 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 93882-12-3 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate), monosodium salt (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C16 H15 Cl N5 O6 P S . Na
SR European Union (EU)
LC STN Files: CA, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, USPATFULL
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study)
RL.NP Roles from non-patents: BIOL (Biological study)
CRN (41941-66-6)

Absolute stereochemistry.

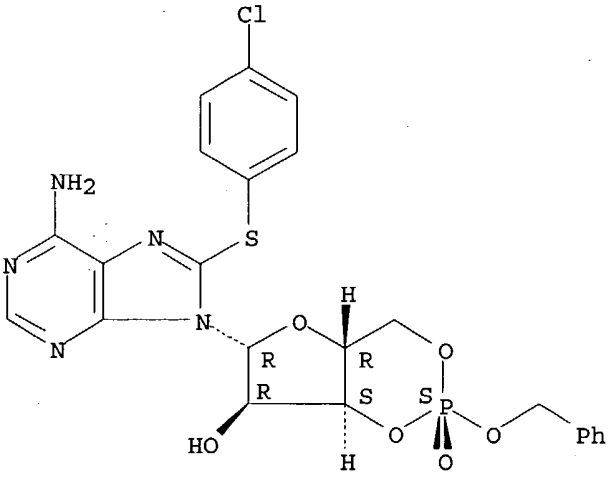


● Na

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 43 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 81791-92-6 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(phenylmethyl phosphate), (S)- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C23 H21 Cl N5 O6 P S
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation)
RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.

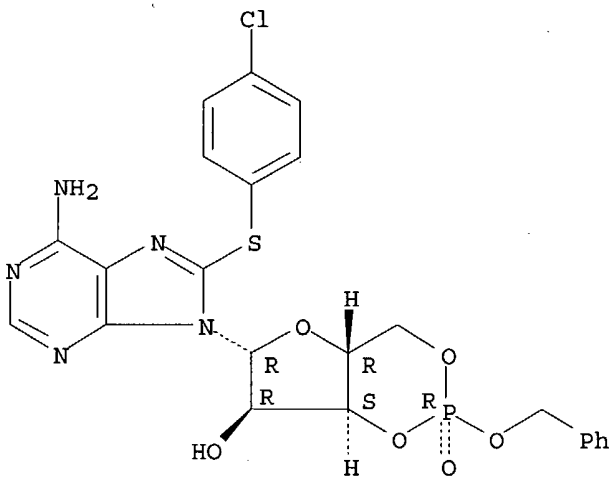


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 44 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 81791-91-5 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(phenylmethyl phosphate), (R)- (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C23 H21 Cl N5 O6 P S
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: PREP (Preparation)
RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.

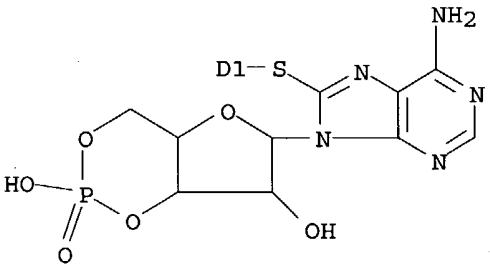


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 45 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 80345-93-3 REGISTRY
CN **Adenosine, 8-[(chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
OTHER NAMES:
CN 8-Chlorophenylthio-cAMP
MF C16 H15 Cl N5 O6 P S
CI IDS
LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

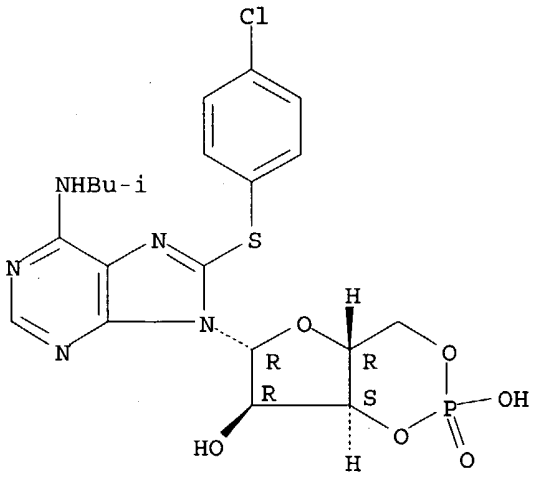
D1—Cl



17 REFERENCES IN FILE CA (1907 TO DATE)
17 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 46 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 72561-15-0 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-N-(2-methylpropyl)-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C20 H23 Cl N5 O6 P S
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

Absolute stereochemistry.

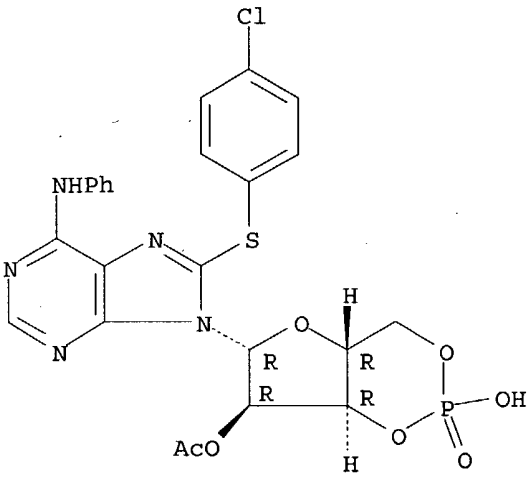


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 47 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 72549-56-5 REGISTRY

CN **Adenosine, 8-[(4-chlorophenyl)thio]-N-phenyl-, cyclic 3',5'-(hydrogen phosphate) 2'-acetate (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C24 H21 Cl N5 O7 P S
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

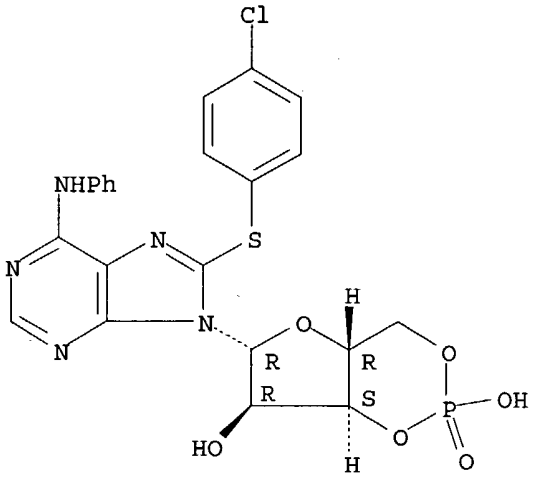
Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 48 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 72549-36-1 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-N-phenyl-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C22 H19 Cl N5 O6 P S
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

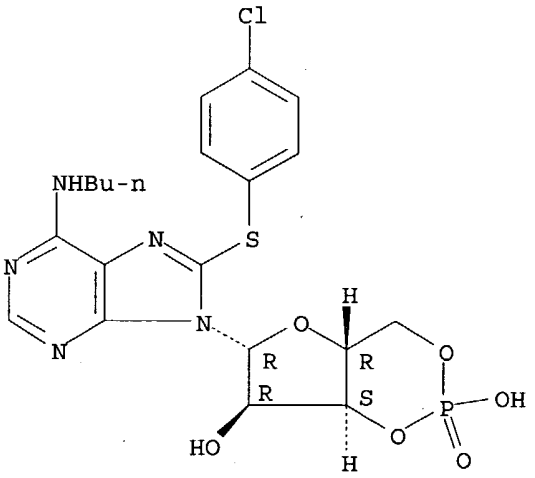
Absolute stereochemistry.



6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 49 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 72549-32-7 REGISTRY
CN **Adenosine, N-butyl-8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C20 H23 Cl N5 O6 P S
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Absolute stereochemistry.

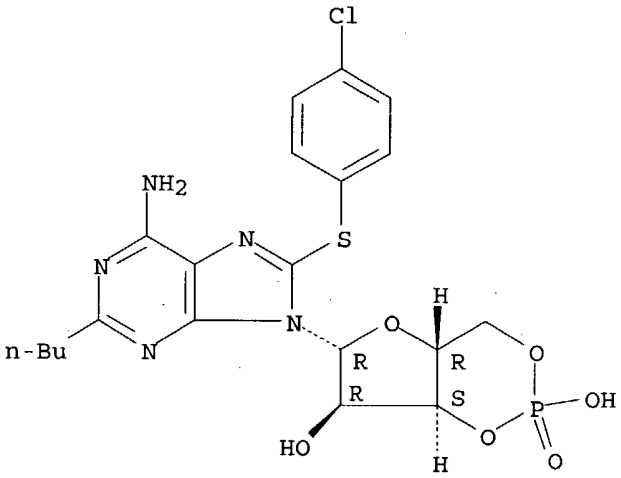


4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 50 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN

RN 58418-41-0 REGISTRY
CN **Adenosine, 2-butyl-8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
OTHER NAMES:
CN **8-(p-Chlorophenylthio)-2-butyladenosine cyclic 3',5'-phosphate**
FS STEREOSEARCH
MF C20 H23 Cl N5 O6 P S
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

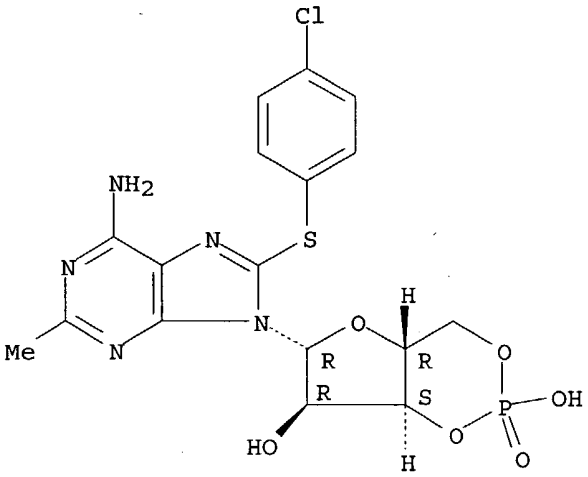
Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 51 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 58418-38-5 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-2-methyl-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
OTHER NAMES:
CN **8-(p-Chlorophenylthio)-2-methyladenosine cyclic 3',5'-phosphate**
FS STEREOSEARCH
MF C17 H17 Cl N5 O6 P S
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

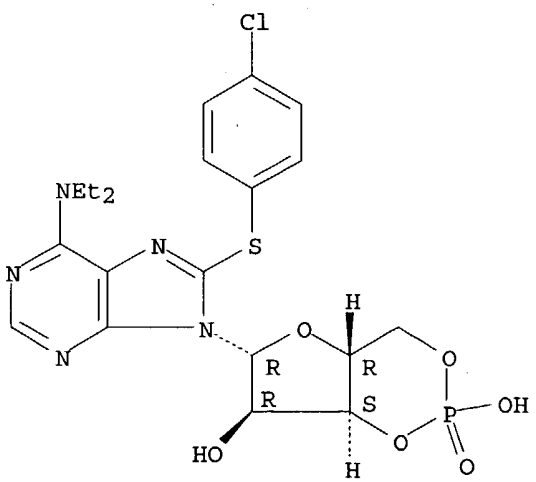
Absolute stereochemistry.



4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 52 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 55628-45-0 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-N,N-diethyl-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C20 H23 Cl N5 O6 P S
LC STN Files: BEILSTEIN*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

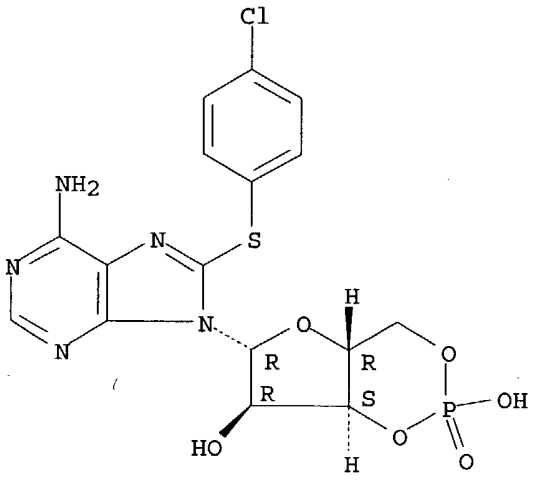
Absolute stereochemistry.



6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 53 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 41941-66-6 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
OTHER NAMES:
CN 8-(4-Chlorophenylthio)-cAMP
CN **8-(4-Chlorophenylthio)cyclic AMP**
CN **8-(p-Chlorophenylthio) 3',5'-cyclic AMP**
CN 8-(p-Chlorophenylthio)-cAMP
CN **8-(p-Chlorophenylthio)-cyclic AMP**
CN **8-(p-Chlorophenylthio)adenosine 3',5'-cyclic phosphate**
CN CPT
FS STEREOSEARCH
DR 111750-89-1, 72549-29-2
MF C16 H15 Cl N5 O6 P S
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, EMBASE, MEDLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.

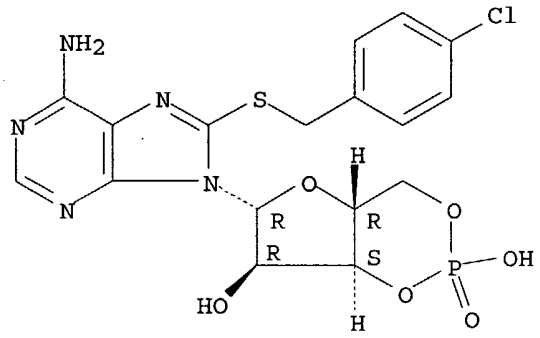


250 REFERENCES IN FILE CA (1907 TO DATE)
250 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 54 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 40950-71-8 REGISTRY
CN **Adenosine, 8-[[(4-chlorophenyl)methyl]thio]-, cyclic 3',5'-(hydrogen phosphate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
OTHER NAMES:
CN 8-[(p-Chlorobenzyl)thio] cyclic AMP
FS STEREOSEARCH
MF C17 H17 Cl N5 O6 P S

LC STN Files: BEILSTEIN*, CA, CAPLUS
        (*File contains numerically searchable property data)
DT.CA CAplus document type: Conference; Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Absolute stereochemistry.



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	305.19	305.40

FILE 'REGISTRY' ENTERED AT 10:35:11 ON 22 DEC 2004
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9
DICTIONARY FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
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http://www.cas.org/ONLINE/DBSS/registryss.html

=> SET TERMSET E#

SET COMMAND COMPLETED

=> DEL SEL Y

=> SEL L14 53 RN

E1 THROUGH E1 ASSIGNED

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=>  S E1/RN

L15          1 41941-66-6/RN

=>  SET TERMSET LOGIN

SET COMMAND COMPLETED

=>  FIL USPATFULL

COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.50     305.90

FILE 'USPATFULL' ENTERED AT 10:35:16 ON 22 DEC 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 21 Dec 2004 (20041221/PD)
FILE LAST UPDATED: 21 Dec 2004 (20041221/ED)
HIGHEST GRANTED PATENT NUMBER: US6834393
HIGHEST APPLICATION PUBLICATION NUMBER: US2004255355
CA INDEXING IS CURRENT THROUGH 21 Dec 2004 (20041221/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 21 Dec 2004 (20041221/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2004
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2004

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent              <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                         <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=>  S L15

L16          17 L15

=> DIS L16 1 TI

L16  ANSWER 1 OF 17  USPATFULL on STN
TI     Use of cox-2 inhibitors for preventing immunodeficiency


=> DIS L16 2 TI

L16  ANSWER 2 OF 17  USPATFULL on STN
TI     Adipogenic differentiation of human mesenchymal stem cells
```

=> DIS L16 3 TI

L16 ANSWER 3 OF 17 USPATFULL on STN
TI Methods and compounds for reducing biofilm formulation

=> DIS L16 4 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 4 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2003:253631 USPATFULL
TITLE: Compositions and methods for treatment of hyperproliferative diseases
INVENTOR(S): Benoit, Gerard, Monrsouir, FRANCE
Gronemeyer, Hinrich, Oberkirch, GERMANY, FEDERAL REPUBLIC OF
Lanotte, Michel, Paris, FRANCE
Gottardis, Marco, Princeton, NJ, United States
PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, Princeton, NJ, United States (U.S. corporation)
Institut National de la Sante et de la Recherche Medicale, Paris, FRANCE (non-U.S. corporation)
Centre National de la Recherche Scientifique, Paris, FRANCE (non-U.S. corporation)
Universite Louis Pasteur, Strasbourg, FRANCE (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6624154	B1	20030923	
APPLICATION INFO.:	US 2000-556675		20000421	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-130649P	19990423 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
LINE COUNT: 2206
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/168.000
SECONDARY: 424/085.100; 424/194.000; 424/015.000; 424/021.000
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/168.000
SECONDARY: 424/085.100; 514/355.000; 514/440.000; 514/463.000; 514/569.000
INT. PATENT CLASSIF.: [7]
MAIN: A01N045-00
SECONDARY: A61K038-19
FIELD OF SEARCH: 514/168; 424/155.1; 424/198.1; 424/85.1; 435/194; 435/21; 435/15
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

The invention relates to compositions comprising a retinoid X receptor agonist and an agent capable of activating protein kinase A. The invention also relates to methods of treating hyperproliferative diseases by administering a retinoid X receptor agonist and an agent capable of activating protein kinase A.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 5 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 5 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2003:195010 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-jun, La Jolla, CA, UNITED STATES
Poo, Mu-ming, La Jolla, CA, UNITED STATES
Ming, Guo-li, La Jolla, CA, UNITED STATES
Tessier-Lavigne, Marc, San Francisco, CA, UNITED STATES
He, Zhigang, San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003134821	A1	20030717
APPLICATION INFO.:	US 2002-272774	A1	20021017 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-900268, filed on 6 Jul 2001, GRANTED, Pat. No. US 6512004 Division of Ser. No. US 1998-145820, filed on 2 Sep 1998, GRANTED, Pat. No. US 6268352
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LINE COUNT: 776
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/185.000; 514/231.500; 514/471.000; 514/408.000; 514/509.000; 514/326.000
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/185.000; 514/231.500; 514/471.000; 514/408.000; 514/509.000; 514/326.000
INT. PATENT CLASSIF.: [7]
MAIN: A61K031-7076
SECONDARY: A61K031-5377; A61K031-453; A61K031-555; A61K031-21; A61K031-365
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 6 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 6 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2003:195009 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-Jun, La Jolla, CA, UNITED STATES
Poo, Mu-Ming, La Jolla, CA, UNITED STATES
Ming, Guo-Li, La Jolla, CA, UNITED STATES
Tessier-Lavigne, Marc, San Francisco, CA, UNITED STATES
He, Zhigang, San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003134820	A1	20030717
APPLICATION INFO.:	US 2002-272741	A1	20021017 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-900268, filed on 6 Jul 2001, GRANTED, Pat. No. US 6512004 Division of Ser. No. US 1998-145820, filed on 2 Sep 1998, GRANTED, Pat. No. US 6268352
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LINE COUNT: 776
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/185.000; 514/231.500; 514/326.000; 514/509.000; 514/263.340; 514/471.000
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/185.000; 514/231.500; 514/326.000; 514/509.000; 514/263.340; 514/471.000
INT. PATENT CLASSIF.: [7]
MAIN: A61K031-7076
SECONDARY: A61K031-555; A61K031-5377; A61K031-453; A61K031-522; A61K031-21; A61K031-365
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 7 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 7 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2002:259417 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-Jun, La Jolla, CA, UNITED STATES
Poo, Mu-Ming, La Jolla, CA, UNITED STATES
Ming, Guo-Li, La Jolla, CA, UNITED STATES
Tessier-Lavigne, Marc, San Francisco, CA, UNITED STATES
He, Zhigang, San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002142990	A1	20021003
APPLICATION INFO.:	US 2002-90095	A1	20020228 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-900268, filed on 6 Jul 2001, PENDING Division of Ser. No. US 1998-145820, filed on 2 Sep 1998, GRANTED, Pat. No. US 6268352
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LINE COUNT: 775
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/048.000

SECONDARY: 514/185.000; 514/231.500; 514/320.000; 514/410.000; 514/263.320
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/048.000
SECONDARY: 514/185.000; 514/231.500; 514/320.000; 514/410.000; 514/263.320
INT. PATENT CLASSIF.: [7]
MAIN: A61K031-711
SECONDARY: A61K031-555; A61K031-522; A61K031-5377; A61K031-4525
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 8 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 8 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2002:12535 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-jun, La Jolla, CA, UNITED STATES
Poo, Mu-Ming, La Jolla, CA, UNITED STATES
Ming, Guo-li, La Jolla, CA, UNITED STATES
Tessier-Lavigne, Marc, San Francisco, CA, UNITED STATES
He, Zhigang, San Francisco, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002006916	A1	20020117
	US 6512004	B2	20030128
APPLICATION INFO.:	US 2001-900268	A1	20010706 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1998-145820, filed on 2 Sep 1998, GRANTED, Pat. No. US 6268352
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LINE COUNT: 1042
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/231.500; 514/185.000; 514/262.000; 514/424.000; 514/509.000
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/455.000
SECONDARY: 514/042.000; 514/047.000; 514/048.000; 514/085.000; 514/174.000; 514/183.000; 514/192.000; 514/211.120; 514/220.000; 514/227.200; 514/248.000; 514/263.380; 514/376.000; 514/423.000; 514/453.000
INT. PATENT CLASSIF.: [7]
MAIN: A61K031-7105
SECONDARY: A61K031-5377; A61K031-555; A61K031-4015; A61K031-522; A61K031-21
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 9 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 9 OF 17 USPATFULL on STN

ACCESSION NUMBER:	2001:214653 USPATFULL
TITLE:	Adipogenic differentiation of human mesenchymal stem cells
INVENTOR(S):	Pittenger, Mark F., Severna Park, MD, United States Beck, Stephen C., Reistertown, MD, United States
PATENT ASSIGNEE(S):	Osiris Therapeutics, Inc., Baltimore, MD, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6322784	B1	20011127
APPLICATION INFO.:	US 1998-246003		19981026 (9)

RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1996-700753, filed on 30 Jul 1996, now patented, Pat. No. US 5827740
DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
LINE COUNT:	1019
ISSUE U.S. PATENT CLASSIF.:	
MAIN:	424/093.700
SECONDARY:	514/003.000; 514/046.000; 514/169.000; 514/171.000; 435/325.000; 435/366.000; 435/372.000; 435/377.000; 435/395.000; 435/405.000; 530/303.000; 552/502.000; 562/503.000
CURRENT U.S. PATENT CLASSIF.:	
MAIN:	424/093.700
SECONDARY:	435/325.000; 435/366.000; 435/372.000; 435/377.000; 435/395.000; 435/405.000; 514/003.000; 514/046.000; 514/169.000; 514/171.000; 530/303.000; 552/502.000; 562/503.000
INT. PATENT CLASSIF.:	[7]
MAIN:	A01N063-00
SECONDARY:	C12N005-06; C12N005-02; A61K038-28; C07J053-00
FIELD OF SEARCH:	424/93.7; 514/3; 514/46; 514/169; 514/171; 435/325; 435/366; 435/372; 435/377; 435/405; 435/395; 530/303; 552/502; 562/503

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

A composition which comprises human mesenchymal stem cells which have the potential to differentiate into cells of more than one connective tissue type and a composition which induces cells from the mesenchymal stem cell population to differentiate into the adipogenic lineage, and a process for inducing such differentiation. The composition for inducing such differentiation comprises a

glucocorticoid, a compound which stimulates cAMP production or inhibits cAMP degradation (such as a phosphodiesterase inhibitor), and/or a compound which upregulates peroxisome proliferator activated receptor γ (PPAR γ) expression and/or increases its binding affinity to its DNA binding site. The process can further include isolating the adipocytes from remaining hMSCs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 10 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 10 OF 17 USPATFULL on STN

ACCESSION NUMBER:	2001:147750 USPATFULL
TITLE:	Method for generating dopaminergic cells derived from neural precursors
INVENTOR(S):	Bowen, David C., Washington, DC, United States Johe, Karl K., Potomac, MD, United States
PATENT ASSIGNEE(S):	NeuralStem Biopharmaceuticals, Ltd., College Park, MD, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6284539	B1	20010904
APPLICATION INFO.:	US 1998-169309		19981009 (9)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
LINE COUNT:	1635
ISSUE U.S. PATENT CLASSIF.:	
MAIN:	435/455.000
SECONDARY:	435/320.100; 435/325.000; 435/368.000; 424/093.210; 514/044.000; 536/023.100; 536/023.500
CURRENT U.S. PATENT CLASSIF.:	
MAIN:	435/455.000
SECONDARY:	424/093.210; 435/320.100; 435/325.000; 435/368.000; 514/044.000; 536/023.100; 536/023.500
INT. PATENT CLASSIF.:	[7]
MAIN:	C12N015-63
SECONDARY:	C12N015-85; C12N015-87; C12N015-00; C12N015-09
FIELD OF SEARCH:	435/467; 435/368; 435/320.1; 435/325; 435/455; 514/44; 424/93.21; 536/23.1; 536/23.5

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

The present invention describes a novel method to direct a particular set of fate choice decisions by multipotential precursor cells from the central nervous system. Specifically we show that introducing the gene coding for the nuclear receptor, Nurr1, into central nervous system (CNS) stem cells causes cells to adopt a dopaminergic cell fate. One use of this technology would be to prepare in vitro neural populations enriched in dopaminergic cells for transplantation in Parkinson's Disease or other neurological disorders. Furthermore, the finding that Nurr1 expression induces a dopaminergic phenotype suggests that introducing this gene into the brains of patients in which dopaminergic cells are degenerating or have been injured may promote the functional recovery of these neurons and thus the clinical recovery of the patient. Finally, the technology described in this application could be incorporated into a program of drug screening or gene discovery.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 11 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 11 OF 17 USPATFULL on STN
ACCESSION NUMBER: 2001:121459 USPATFULL
TITLE: Promoters of neural regeneration
INVENTOR(S): Song, Hong-jun, La Jolla, CA, United States
Poo, Mu-Ming, La Jolla, CA, United States
Ming, Guo-li, La Jolla, CA, United States
Tessier-Lavigne, Marc, San Francisco, CA, United States
He, Zhigang, San Francisco, CA, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6268352	B1	20010731
APPLICATION INFO.:	US 1998-145820		19980902 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
LINE COUNT: 886
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/042.000; 514/048.000; 514/183.000; 514/192.000; 514/220.000; 514/211.120; 514/227.200; 514/248.000; 514/263.000; 514/274.000; 514/376.000; 514/423.000; 514/453.000; 435/375.000
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 435/375.000; 514/042.000; 514/048.000; 514/183.000; 514/185.000; 514/192.000; 514/211.120; 514/220.000; 514/227.200; 514/248.000; 514/263.340; 514/274.000; 514/376.000; 514/423.000; 514/453.000
INT. PATENT CLASSIF.: [7]
MAIN: A61K031-70
SECONDARY: A61K031-40; A61K031-33
FIELD OF SEARCH: 514/42; 514/47; 514/48; 514/183; 514/192; 514/220; 514/211.12; 514/227.2; 514/263; 514/274; 514/248; 514/376; 514/423; 514/453; 435/375
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

The invention provides methods and compositions for promoting neural cell growth and/or regeneration. The general methods involve contacting with an activator of a cyclic nucleotide dependent protein kinase a neural cell subject to growth repulsion mediated by a neural cell growth repulsion factor. The activator may comprise a direct or an indirect activator of the protein kinase; the repulsion factor typically comprises one or more natural, endogenous proteins mediating localized repulsion or inhibition of neural cell growth; and the target cells are generally vertebrate neurons, typically injured mammalian neurons. The subject compositions include mixtures comprising a neural cell, an activator of a cyclic nucleotide dependent protein kinase and a neural cell growth repulsion factor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 12 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 12 OF 17 USPATFULL on STN
ACCESSION NUMBER: 1999:56466 USPATFULL
TITLE: 8-Cl cAMP as anti-cancer drug
INVENTOR(S): Cho-Chung, Yoon Sang, Bethesda, MD, United States
PATENT ASSIGNEE(S): The United States of America as represented by the Secretary of the Department of Health and Human

Services, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5902794		19990511
APPLICATION INFO.:	US 1997-937020		19970924 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-329764, filed on 27 Oct 1994, now patented, Pat. No. US 5792752 which is a continuation of Ser. No. US 1992-896452, filed on 4 Jun 1992, now abandoned which is a continuation of Ser. No. US 1988-198489, filed on 23 May 1988, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
LINE COUNT: 1524
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 536/026.130
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 536/026.130
INT. PATENT CLASSIF.: [6]
MAIN: A61K031-70
SECONDARY: C07H019-213
FIELD OF SEARCH: 514/47; 536/26.13
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

Site 1- and site 2-selective derivatives of cAMP have been found to inhibit the of a variety of cancer and leukemic cells. The compounds have been found to have a synergistic effect in cancer and leukemic cell growth inhibition when a site 1-selective compounds is used in combination with a site 2-selective compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 13 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 13 OF 17 USPATFULL on STN
ACCESSION NUMBER: 1998:131612 USPATFULL
TITLE: Adipogenic differentiation of human mesenchymal stem cells
INVENTOR(S): Pittenger, Mark F., Severna Park, MD, United States
PATENT ASSIGNEE(S): Osiris Therapeutics, Inc., Baltimore, MD, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5827740		19981027
APPLICATION INFO.:	US 1996-700753		19960730 (8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
LINE COUNT: 763
ISSUE U.S. PATENT CLASSIF.:
MAIN: 435/372.000
SECONDARY: 435/366.000; 435/377.000; 435/405.000; 514/046.000; 514/171.000; 514/261.000; 514/263.000; 514/415.000; 532/002.000
CURRENT U.S. PATENT CLASSIF.:
MAIN: 435/372.000
SECONDARY: 435/366.000; 435/377.000; 435/405.000; 514/046.000; 514/171.000; 514/263.310; 514/263.400; 514/415.000

INT. PATENT CLASSIF.: [6]
MAIN: C12N005-08
SECONDARY: C07J001-00; A61K045-00
FIELD OF SEARCH: 435/377; 435/372; 435/366; 435/405; 424/572; 424/574; 514/171; 514/46; 514/261; 514/263; 514/415; 532/2
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

A composition which comprises human mesenchymal stem cells which have the potential to differentiate into cells of more than one connective tissue type and a composition which induces cells from the mesenchymal stem cell population to differentiate into the adipogenic lineage, and a process for inducing such differentiation. The composition for inducing such differentiation comprises a glucocorticoid and a compound which stimulates cAMP production or inhibits cAMP degradation (such as a phosphodiesterase inhibitor). The process can further include isolating the adipocytes from remaining hMSCs.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 14 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 14 OF 17 USPATFULL on STN
ACCESSION NUMBER: 1998:95525 USPATFULL
TITLE: 8-chloro camp and related camp compounds as antineoplastic agents
INVENTOR(S): Cho-Chung, Yoon Sang, Bethesda, MD, United States
Robins, deceased, Roland K., late of Provo, UT, United States by Lessa R. Robins, legal representative
PATENT ASSIGNEE(S): The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5792752		19980811
APPLICATION INFO.:	US 1994-329764		19941027 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1992-896452, filed on 4 Jun 1992, now abandoned which is a continuation of Ser. No. US 1988-198489, filed on 23 May 1988, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
LINE COUNT: 1567
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 536/026.130
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 536/026.130
INT. PATENT CLASSIF.: [6]
MAIN: A61K031-70
FIELD OF SEARCH: 514/47; 536/26.13
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

Site 1- and site 2-selective derivatives of cAMP have been found to inhibit the growth of a variety of cancer and leukemic cells. The compounds have been found to have a synergistic effect in cancer and leukemic cell growth inhibition when a site 1-selective compound is used in combination with a site 2-selective compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 15 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 15 OF 17 USPATFULL on STN
ACCESSION NUMBER: 97:112356 USPATFULL
TITLE: Membrane-permeant second messengers
INVENTOR(S): Tsien, Roger Y., La Jolla, CA, United States
Schultz, Carsten, La Jolla, CA, United States
PATENT ASSIGNEE(S): The Regents of the University of California, Oakland, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5693521		19971202
APPLICATION INFO.:	US 1993-45585		19930409 (8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
LINE COUNT: 1259
ISSUE U.S. PATENT CLASSIF.:
MAIN: 435/240.100
SECONDARY: 514/045.000; 514/047.000; 514/048.000; 435/007.210; 435/240.200; 536/026.700; 536/026.710; 536/026.720; 536/027.300; 536/117.000
CURRENT U.S. PATENT CLASSIF.:
MAIN: 435/325.000
SECONDARY: 435/007.210; 514/045.000; 514/047.000; 514/048.000; 536/026.700; 536/026.710; 536/026.720; 536/027.300; 536/117.000
INT. PATENT CLASSIF.: [6]
MAIN: A61K031-70
SECONDARY: C07H019-167; C07H019-20; C12N005-00
FIELD OF SEARCH: 514/47; 514/48; 514/45; 514/75; 514/25; 514/102; 514/103; 514/104; 536/1.11; 536/4.1; 536/26.7; 536/26.71; 536/26.72; 536/27.3; 536/117; 435/7.21; 435/240.1; 435/240.2
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

Acyloxyalkyl esters of phosphate-containing second messengers which are capable of permeating cell membranes. Once inside the cell, the ester derivatives undergo enzymatic conversion to the biologically active form of the second messenger. Acyloxyalkyl esters of second messengers, such as cAMP, cGMP, inositol triphosphate and inositol tetraphosphate are disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 16 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 16 OF 17 USPATFULL on STN
ACCESSION NUMBER: 88:72404 USPATFULL
TITLE: Pest controlling agents
INVENTOR(S): Nathanson, James A., Wellesley, MA, United States
PATENT ASSIGNEE(S): The General Hospital Corporation, Boston, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4783457		19881108
APPLICATION INFO.:	US 1987-26968		19870317 (7)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1984-605847, filed on 1 May

1984, now patented, Pat. No. US 4678775
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
LINE COUNT: 975
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/227.200
SECONDARY: 514/256.000; 514/365.000; 514/374.000; 514/377.000; 514/401.000; 514/426.000; 514/638.000; 514/653.000; 514/228.800
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/227.200
SECONDARY: 514/228.800; 514/256.000; 514/365.000; 514/374.000; 514/377.000; 514/401.000; 514/426.000; 514/653.000; 514/658.000
INT. PATENT CLASSIF.: [4]
MAIN: A01N043-84
SECONDARY: A01N043-54; A01N043-78; A01N043-76
FIELD OF SEARCH: 514/183; 514/222; 514/254; 514/256; 514/263; 514/370; 514/396; 514/398; 514/404; 514/637; 514/653; 514/677; 514/365; 514/374; 514/377; 514/426; 514/638
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

The invention relates to an invertebrate pest controlling composition comprising an invertebrate pest-controlling amount of a non-formamidine octopamine against having substantial activity toward an octopamine receptor present in an invertebrate pest and a pesticidally inert carrier.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> DIS L16 17 ISTD IABS
THE ESTIMATED COST FOR THIS REQUEST IS 1.84 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L16 ANSWER 17 OF 17 USPATFULL on STN
ACCESSION NUMBER: 87:48849 USPATFULL
TITLE: Method of controlling pests
INVENTOR(S): Nathanson, James A., P.O. Box 719, 1 Grove St., Wellesley, MA, United States 02181

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4678775		19870707
APPLICATION INFO.:	US 1984-605847		19840501 (6)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
LINE COUNT: 1065
ISSUE U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/183.000; 514/222.000; 514/254.000; 514/256.000; 514/263.000; 514/370.000; 514/396.000; 514/398.000; 514/401.000; 514/637.000; 514/653.000; 514/677.000
CURRENT U.S. PATENT CLASSIF.:
MAIN: 514/047.000
SECONDARY: 514/081.000; 514/183.000; 514/227.200; 514/228.800; 514/249.000; 514/256.000; 514/370.000; 514/396.000; 514/398.000; 514/401.000; 514/637.000; 514/653.000; 514/677.000
INT. PATENT CLASSIF.: [4]
MAIN: A01N043-04
SECONDARY: A01N043-00; A01N043-84; A01N043-58
FIELD OF SEARCH: 424/45; 424/253; 424/180; 424/273R; 424/316; 424/326; 424/DIG.8; 514/47; 514/183; 514/222; 514/254; 514/256; 514/263; 514/396; 514/398; 514/451; 514/637; 514/653;

514/677; 514/370
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ABSTRACT:

A method of controlling a pest which comprises bringing into contact with the pest a pest-controlling amount of an agent selected from the group consisting of

(1) a non-formamidine -p-octopamine agonist having substantial activity toward an octopamine receptor present in the pest;

(2) a compound directly and substantially stimulating the enzyme, adenylate cyclase; and

(3) a cyclic adenosine monophosphate (cAMP) analogue.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=>

=>
Executing the logoff script...

=> LOG H

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	35.23	341.13

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 10:39:10 ON 22 DEC 2004

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1635KXH

PASSWORD:
* * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'USPATFULL' AT 11:08:20 ON 22 DEC 2004
FILE 'USPATFULL' ENTERED AT 11:08:20 ON 22 DEC 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	35.23	341.13

=> D 22 26 32
17 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE
The answer numbers requested are not in the answer set.
ENTER ANSWER NUMBER OR RANGE (1):L14
ANSWER NUMBERS NOT CORRECTLY SPECIFIED
Enter an answer number, Example: 10
several answer numbers, Example: 3,7,10
a range of answer numbers, Example: 5-10
or a combination of these. Example: 3,7,9-10,15
ENTER ANSWER NUMBER OR RANGE (1):1

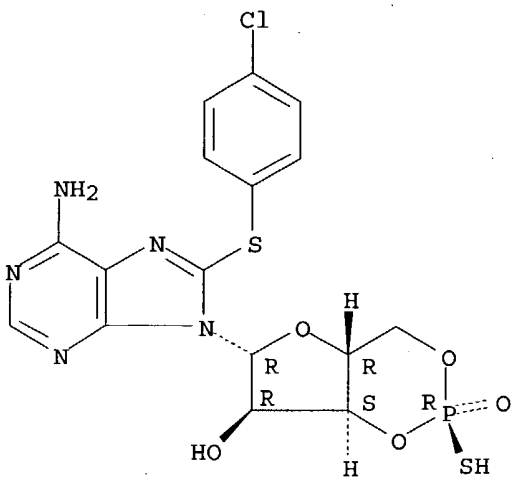
L16 ANSWER 1 OF 17 USPATFULL on STN

AN 2004:108238 USPATFULL
TI Use of cox-2 inhibitors for preventing immunodeficiency
IN Tasken, Kjetil, Rykkinn, NORWAY
Moutschen, Michel, Neupre, BELGIUM
Rahmouni-Piette, Souad, Seraing, BELGIUM
Aandahl, Einar Martin, Lillehammer, NORWAY
Aukurst, P?aring,l, Ridabu, NORWAY
Fr.o slashed.land, Stig S, Oslo, NORWAY
Johansson, Christian C, Oslo, NORWAY
Hansson, Vidar, Sandvika, NORWAY
Klaveness, Jo, Oslo, NORWAY
PI US 2004082640 A1 20040429
AI US 2003-333657 A1 20030606 (10)
WO 2001-GB3284 20010720
PRAI GB 2000-17908 20000720
GB 2001-9648 20010419
DT Utility
FS APPLICATION
LN.CNT 1698
INCL INCLM: 514/406.000
INCLS: 514/471.000
NCL NCLM: 514/406.000
NCLS: 514/471.000
IC [7]
ICM: A61K031-365
ICS: A61K031-415
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> D L14 22 26 32
YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:Y

L14 ANSWER 22 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 221905-35-7 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (R)-phosphorothioate], monosodium salt (9CI)** (CA INDEX NAME)
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S2 . Na
SR CAS Client Services
CRN (129735-01-9)

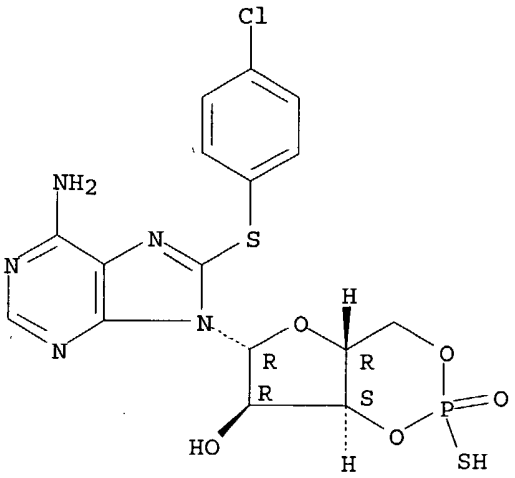
Absolute stereochemistry.



● Na

L14 ANSWER 26 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 152322-59-3 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate) (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study)
RL.NP Roles from non-patents: BIOL (Biological study)

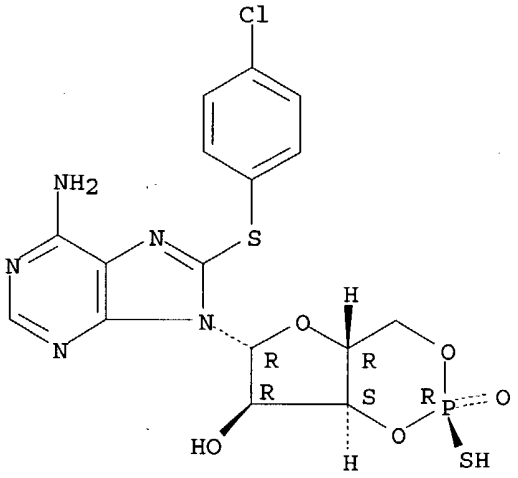
Absolute stereochemistry.



2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L14 ANSWER 32 OF 54 REGISTRY COPYRIGHT 2004 ACS on STN
RN 129735-01-9 REGISTRY
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-[hydrogen (R)-phosphorothioate] (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **4H-Furo[3,2-d]-1,3,2-dioxaphosphorin, adenosine deriv.**
CN **Adenosine, 8-[(4-chlorophenyl)thio]-, cyclic 3',5'-(hydrogen phosphorothioate), (R)-**
FS STEREOSEARCH
MF C16 H15 Cl N5 O5 P S2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, CSCHEM, TOXCENTER
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PROC (Process); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); USES (Uses)

Absolute stereochemistry.



6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.70	353.18

FILE 'REGISTRY' ENTERED AT 11:10:25 ON 22 DEC 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9
DICTIONARY FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when

conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> SET TERMSET E#

SET COMMAND COMPLETED

=> DEL SEL Y

=> SEL L14 32 RN

E1 THROUGH E1 ASSIGNED

=> S E1/RN

L17 1 129735-01-9/RN

=> SET TERMSET LOGIN

SET COMMAND COMPLETED

=> FIL CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.50	353.68

FILE 'CAPLUS' ENTERED AT 11:10:30 ON 22 DEC 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 22 Dec 2004 VOL 141 ISS 26
FILE LAST UPDATED: 21 Dec 2004 (20041221/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S L17

L18 6 L17

=> D IBIB ABS TOT

L18 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:701995 CAPLUS

DOCUMENT NUMBER: 139:303762
TITLE: cAMP analog mapping of Epac1 and cAMP kinase: discriminating analogs demonstrate that Epac and camp kinase act synergistically to promote PC-12 cell neurite extension
AUTHOR(S): Christensen, Anne E.; Selheim, Frode; de Rooij, Johan; Dremier, Sarah; Schwede, Frank; Dao, Khanh K.; Martinez, Aurora; Maenhaut, Carine; Bos, Johannes L.; Genieser, H.-G.; Doskeland, Stein O.
CORPORATE SOURCE: Departments of Anatomy and Cell Biology, University of Bergen, Bergen, 5009, Norway
SOURCE: Journal of Biological Chemistry (2003), 278(37), 35394-35402
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Little is known about the relative role of cAMP-dependent protein kinase (cAPK) and guanine exchange factor directly activated by cAMP (Epac) as mediators of cAMP action. The authors tested cAMP analogs for ability to selectively activate Epac1 or cAPK and discriminate between the binding sites of Epac and of cAPKI and cAPKII. The authors found that commonly used cAMP analogs, like 8-Br-cAMP and 8-pCPT-cAMP, activate Epac and cAPK equally as well as cAMP, i.e., were full agonists. In contrast, 6-modified cAMP analogs, like N6-benzoyl-cAMP, were inefficient Epac activators and full cAPK activators. Analogs modified in the 2'-position of the ribose induced stronger Epac1 activation than cAMP but were only partial agonists for cAPK. 2'-O-Alkyl substitution of cAMP improved Epac/cAPK binding selectivity 10-100-fold. Phenylthio substituents in position 8, particularly with MeO- or Cl- in p-position, enhanced the Epac/cAPK selectivity even more. The combination of 8-pCPT- and 2'-O-Me substitutions improved the Epac/cAPK binding selectivity about three orders of magnitude. The cAPK selectivity of 6-substituted cAMP analogs, the preferential inhibition of cAPK by moderate concns. of Rp-cAMPS analogs, and the Epac selectivity of 8-pCPT-2'-O-methyl-cAMP was also demonstrated in intact cells. Using these compds. to selectively modulate Epac and cAPK in PC-12 cells, the authors observed that analogs selectively activating Epac synergized strongly with cAPK specific analogs to induce neurite outgrowth. The authors therefore conclude that cAMP-induced neurite outgrowth is mediated by both Epac and cAPK.
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:656228 CAPLUS
DOCUMENT NUMBER: 136:31499
TITLE: Evidence that the anti-spasmogenic effect of the β-adrenoceptor agonist, isoprenaline, on guinea-pig trachealis is not mediated by cyclic AMP-dependent protein kinase
AUTHOR(S): Spicuzza, Lucia; Belvisi, Maria G.; Birrell, Mark A.; Barnes, Peter J.; Hele, David J.; Giembycz, Mark A.
CORPORATE SOURCE: Department of Thoracic Medicine, National Heart & Lung Institute, Imperial College School of Medicine, London, SW3 6LY, UK
SOURCE: British Journal of Pharmacology (2001), 133(8), 1201-1212
CODEN: BJPCBM; ISSN: 0007-1188
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 1 The spasmolytic and anti-spasmogenic activity of β-adrenoceptor agonists on airways smooth muscle is thought to involve activation of the cAMP/cAMP-dependent protein kinase (PKA) cascade. Here we have tested the

hypothesis that PKA mediates the anti-spasmogenic activity of isoprenaline and other cAMP-elevating agents in guinea-pig isolated trachea by utilizing a number of cell permeant cAMP analogs that act as competitive "antagonists" of PKA. 2 Anion-exchange chromatog. of guinea-pig tracheae resolved two peaks of PKA activity that corresponded to the type I (.apprx.5%) and type II (.apprx.93%) isoenzymes. 3 Pre-treatment of tracheae with zardaverine (30 μM), vasoactive intestinal peptide (VIP) (1 μM) and the non-selective activator of PKA, Sp-8-CPT-cAMPS (10 μM), produced a non-parallel right-wards shift in the concentration-response curves that described acetylcholine (ACh)-induced tension generation. The type II-selective PKA inhibitor, Rp-8-CPT-cAMPS (300 μM), abolished this effect. 4 Pre-treatment of tracheae with Sp-8-Br-PET-cGMPS (30 μM) produced a non-parallel right-wards shift of the concentration-response curves that described ACh-induced tension generation. The selective cGMP-dependent protein kinase (PKG) inhibitor, Rp-8-pCPT-cGMPS (300 μM), abolished this effect. 5 Pre-treatment of tracheae with isoprenaline (1 μM) produced a 10 fold shift to the right of the ACh concentration-response curve by a mechanism that was unaffected by Rp-8-Br-cAMPS (300 μM, selective inhibitor of type I PKA), Rp-8-CPT-cAMPS (300 μM) and Rp-8-pCPT-cGMPS (300 μM). 6 We conclude that the anti-spasmogenic activity of Sp-8-CPT-cAMPS, zardaverine and VIP in guinea-pig trachea is attributable to activation of the cAMP/PKA cascade whereas isoprenaline suppresses ACh-induced contractions by a mechanism(s) that is independent of PKA and PKG.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:719272 CAPLUS
DOCUMENT NUMBER: 130:490
TITLE: Use of compounds inhibiting cAMP-dependent protein kinase A as immunomodulating agents for treating immunosuppressive diseases
INVENTOR(S): Tasken, Kjetil; Aandahl, Einar Martin; Aukrust, Pal; Skalhegg, Bjorn S.; Muller, Fredrik; Froland, Stig; Hansson, Vidar
PATENT ASSIGNEE(S): Norway
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9848809	A1	19981105	WO 1998-NO134	19980429
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2288215	AA	19981105	CA 1998-2288215	19980429
AU 9870865	A1	19981124	AU 1998-70865	19980429
AU 738674	B2	20010920		
EP 1024809	A1	20000809	EP 1998-917808	19980429
EP 1024809	B1	20020306		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002501499	T2	20020115	JP 1998-546856	19980429
NZ 501181	A	20020301	NZ 1998-501181	19980429

AT 213944	E	20020315	AT 1998-917808		19980429
PT 1024809	T	20020731	PT 1998-917808		19980429
ES 2171018	T3	20020816	ES 1998-917808		19980429
NO 9905269	A	19991213	NO 1999-5269		19991028
PRIORITY APPLN. INFO.:			NO 1997-1997	A	19970429
			WO 1998-NO134	W	19980429

AB Several compds. capable of inhibiting cAMP-dependent protein kinase A (PKA) are used to produce a medicament increasing T-cell proliferation in patients with immunosuppressive diseases. Inhibitors include cAMP analogs, ribozymes, antisense DNA, and peptides binding to the anchoring region of PKA. In T-cells from normal blood donors, TCR/CD3-stimulated T-cell proliferation was inhibited by a cAMP agonist (Sp-8-Br-cAMPS). This effect was almost completely reversed by increasing concns. of complementary antagonist (Rp-8-Br-cAMPS (I)). However, antagonist alone did not alter proliferation of normal T-cells. In contrast, when the TCR/CD3-induced proliferation of T-cells from a HIV-infected patient was investigated, I not only reversed the effect of the complementary agonist, but further increased the proliferation above the levels in untreated cells. When the effect of the antagonist alone was assessed in T-cells from HIV-infected patients, there was a concentration-dependent increase in TCR/CD3-induced proliferation that was more than 2-fold at higher concns. T-cells responding poorly to TCR/CD3 stimulation benefitted most from cAMP antagonist treatment.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:101527 CAPLUS
DOCUMENT NUMBER: 124:223905
TITLE: Antagonists of cyclic nucleotide-gated channels and molecular mapping of their site of action
AUTHOR(S): Kramer, Richard H.; Tibbs, Gareth R.
CORPORATE SOURCE: Dep. Molecular Cellular Pharmacology, Univ. Miami School Medicine, Miami, FL, 33101, USA
SOURCE: Journal of Neuroscience (1996), 16(4), 1285-93
CODEN: JNRSDS; ISSN: 0270-6474
PUBLISHER: Society for Neuroscience
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Activation of photoreceptor and olfactory cyclic nucleotide-gated (CNG) channels involves distinct ligand-binding and channel-gating reactions. To dissociate binding from gating, the authors identified the first competitive antagonists of CNG channels: specific phosphorothioate derivs. of cAMP and cGMP. The authors also identified membrane-permeant forms of these mols. that are antagonists and that will be useful for elucidating physiol. roles for CNG channels in intact cells. The photoreceptor and olfactory CNG channels determine which of the phosphorothioate derivs. are agonists and which are antagonists based on different structural features of the ligand. The photoreceptor channel uses the nature of the purine ring (adenine vs. guanine), whereas the olfactory channel uses the isomeric position of the thiophosphate S atom (Rp vs. Sp). Interestingly, the same ligand, Rp-cGMPS, has opposite effects on the two channels, activating the photoreceptor channel and antagonizing the olfactory channel. Because Rp-cGMPS binds to both channels but activates only one, the channels must differ in a protein region that couples binding to gating. Chimeric photoreceptor and olfactory CNG channels reveal that the cytoplasmic C-terminal domain dets. whether bound ligand activates the channel successfully. Hence, the C terminus contains not only the cyclic nucleotide-binding site, but also a region that couples ligand binding to channel gating.

L18 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:787966 CAPLUS
DOCUMENT NUMBER: 123:282000
TITLE: Novel (Rp)-cAMPS analogs as tools for inhibition of

cAMP-kinase in cell culture. Basal cAMP-kinase activity modulates interleukin-1β action

AUTHOR(S): Gjertsen, Bjoern T.; Mellgren, Gunnar; Otten, Anne; Maronde, Erik; Genieser, Hans-G.; Jastorff, Bernd; Vintermyr, Olav K.; McKnight, G. Stanley; Doeskeland, Stein O.

CORPORATE SOURCE: Dep. Anat. Cell Biol., Univ. Bergen, Bergen, N-5009, Norway

SOURCE: Journal of Biological Chemistry (1995), 270(35), 20599-607
CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Bio logy

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Novel (Rp)-cAMPS analogs differed widely in ability to antagonize cAMP activation of pure cAMP-dependent protein kinase I and II and to antagonize actions of cAMP on gene expression, shape change, apoptosis, DNA replication, and protein phosphorylation in intact cells. These differences were related to different abilities of the analogs to stabilize the holoenzyme form relative to the dissociated form of cAMP kinase type I and II. (Rp)-8-Br-cAMPS and (Rp)-8-Cl-cAMPS were the most potent cAMP antagonists for isolated type I kinase and for cells expressing mostly type I kinase, like IPC-81 leukemia cells, fibroblasts transfected with type I regulatory subunit (RI), and primary hepatocytes. It is proposed that (Rp)-8-Br-cAMPS or (Rp)-8-Cl-cAMPS should replace (Rp)-cAMPS as the first line cAMP antagonist, particularly for studies in cells expressing predominantly type I kinase. The phosphorylation of endogenous hepatocyte proteins was affected oppositely by (Rp)-8-Br-cAMPS and increased cAMP, indicating that (Rp)-8-Br-cAMPS inhibited basal cAMP-kinase activity. The inhibition of basal kinase activity was accompanied by enhanced DNA replication, an effect which could be reproduced by microinjected mutant cAMP-subresponsive RI. It is concluded that the basal cAMP-kinase activity exerts a tonic inhibition of hepatocyte replication. (Rp)-8-Br-cAMPS and microinjected RI also desensitized hepatocytes toward inhibition of DNA synthesis by interleukin-1β. This indicates that basal cAMP-kinase activity can have a permissive role for the action of another (interleukin-1β) signaling pathway.

L18 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

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TITLE: Probing the cyclic nucleotide binding sites of cAMP-dependent protein kinases I and II with analogs of adenosine 3',5'-cyclic phosphorothioates

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AB A set of cAMP analogs were synthesized that combined exocyclic S substitutions in the equatorial (Rp) or the axial (Sp) position of the cyclophosphate ring with modifications in the adenine base of cAMP. The potency of these compds. to inhibit the binding of [3H]cAMP to sites A and B from type I (rabbit skeletal muscle) and type II (bovine myocardium) cAMP-dependent protein kinase was determined quant. On the average, the Sp isomers had a 5-fold lower affinity for site A and a 30-fold lower affinity for site B of isoenzyme I than their cyclophosphate homolog. The mean reduction

in affinities for the equivalent sites of isoenzyme II were 20- and 4-fold, resp. The Rp isomers showed a decrease in affinity of .apprx.400- and .apprx.200-fold for sites A and B, resp., of isoenzyme I, against 200- and 45-fold for sites A and B of isoenzyme II. The Sp substitutions therefore increased the relative preference for site A of isoenzyme I and site B of isoenzyme II. The Rp substitutions, on the other hand, increased the relative preference for site B of both isoenzymes. These data showed that the Rp and Sp substitutions are tolerated differently by the 2 intrachain sites of isoenzymes I and II. They also support the hypothesis that it is the axial, and not the previously proposed equatorial O atom that contributes the neg. charge for the ionic interaction with an invariant arginine in all 4 binding sites. In addition, they demonstrate that combined modifications in the adenine ring and the cyclic phosphate ring of cAMP can enhance the ability to discriminate between site A and B of 1 isoenzyme as well as to discriminate between isoenzyme I and II. Since Rp analogs of cAMP are known to inhibit activation of cAMP-dependent protein kinases, the findings of the present study have implications for the synthesis of analogs having a very high selectivity for isoenzyme I or II.

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